BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-2SAM
VOLUME 3

1 SEPTEMBER 1999

Flying Operations

SPECIAL AIR MISSION (SAM) OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: HQ AMC/DOV
(Major Dan Brunskole)
Supersedes AMCI 11-202, 13 November 1995

Certified by: HQ USAF/XOO
(Maj Gen Michael S. Kudlacz)
Pages: 153
Distribution: F

This volume implements AFPD 11-2, *Aircraft Rules and Procedures*. It establishes policy for the operation of 89 AW VC-25A, C-32, C-137C, C-9C, C-37, and C-20B/C/H aircraft to safely, comfortably, and reliably accomplish their worldwide mobility missions. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This instruction is not applicable to Air National Guard (ANG) or Air Force Reserve Command (AFRC) units.

The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. The Privacy Act System Number F011 AF XO A, Air Force Operations Resource Management System (AFORMS) covers required information. The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule.*

This document is new and must be completely reviewed. This instruction contains references to the following field (subordinate level) publications and forms which, until converted to departmental level (AF) publications and forms, may be obtained from the respective MAJCOM publication office:

Publications: AMCI 11-208

Forms: AMC Forms 41, 43, 54, 196, and 423; AF Forms 4084, 4085; and 89AW Form 139.

Chapter 1

GENERAL INFORMATION

1.1. General.

1.1.1. This AFI provides guidelines for 89 AW VC-25A, C-32A, C-137C, C-9C, C-37A, and C-20B/C/H Special Airlift Missions (SAM) operations and applies to all SAM aircrews flying the above Mission Design Series (MDS) aircraft and all management levels concerned with operation of SAM and the above mentioned MDS aircraft. It is a compilation of information from aircraft flight manuals, FLIP publications, and other Air Force directives, as well as an original source document for many areas. Basic source directives have precedence in the case of any conflicts, revisions, and matters of interpretation. For those areas where this AFI is the source document, waiver authority will be in accordance with paragraph **1.4.3.** For those areas where this AFI repeats information contained in other source documents, waiver authority will be in accordance with these source documents.

1.1.2. This AFI will be used by all units and agencies involved in or supporting 89 AW's, VC-25A, C-32A, C-137C, C-9C, C-37A, and C-20B/C/H SAM operations. Copies will be current and available to planning staffs from headquarters to aircrew level. A copy of this AFI will also be maintained at transportation and base operations passenger manifesting agencies.

1.2. Applicability. This AFI is applicable to all individuals operating 89 AW's VC-25A, C-32A, C-137C, C-9C, C-37A, and C-20B/C/H SAM aircraft.

1.3. Key Words Explained .

1.3.1. "Will" and "shall" indicate a mandatory requirement.

1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. "Note" indicates operating procedures, techniques, etc. that are considered essential to emphasize.

1.4. Deviations and Waivers. Do not deviate from the policies and guidance in this AFI under normal circumstances, except:

1.4.1. For safety.

1.4.2. When it is necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required, the AC has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without waiver through channels to MAJCOM OPR.

1.4.3. Unless otherwise directed in this AFI, waiver authority for the contents of this document is the AMC/DO (lead-command). For missions under TACC operational control, send all waiver requests directly through the TACC.

1.4.3.1. Due to the unique mission of the 89 AW, waiver authority for specific areas of this instruction are delegated to the 89 AW/CC, 89 OG/CC, and/or the Presidential Pilot for Presidential aircraft operations.

1.4.3.2. All deviations to any provision of this instruction must be reported to 89 OG/OGV through 89 OG/OGO. All waivers and waiver requests will be coordinated with the 89th Operations Group Stan/Eval (89 OG/OGV) branch. **EXCEPTION**. Contingency missions. Waiver authority for contingency missions will be listed in the OPORD/Tasking ORDER, etc., or the DIRMOBFOR (or equivalent) for the agency with C2 of the aircraft. Crew members may request additional information or confirmation from their home units or MAJCOM/DO.

1.5. Supplements. MAJCOMs may supplement this AFI according to AFPD 11-2, *Aircraft Rules and Procedures*. The 89AW may publish local procedures in **Chapter 10** of this AFI. Local procedures will not duplicate, alter, amend, or be less restrictive than the provisions of this basic AFI or flight manual publications.

1.5.1. Before publication of **Chapter 10**, send one copy to HQ AMC/DOV, through 21 AF, for validation.

1.5.2. Send final copies to HQ AMC/DOV and 21 AF.

1.6. Requisition and Distribution Procedures. Order this AFI through the servicing Publications Distribution office (PDO). Unit commanders provide copies for all aircrew members and associated support personnel. This publication is available digitally on the SAF/AAD WWW site at http://afpubs.hq.af.mil. Contact your PDO for the monthly CD-ROM or access to the bulletin board system.

1.7. Improvement Recommendations. AMC Directorate of Operations (HQ AMC/DO) has overall responsibility for administration of this AFI. Send comments and suggested improvements on AF Form 847, **Recommendation for Change of Publication**. Proposed changes will be routed through 89OG/OGV, to HQ AMC/DOV, 402 Scott Drive Unit 3A7, Scott AFB IL, 62225-5302 according to AFI 11-215, *Flight Manual Procedures* and the MAJCOM Supplement.

1.8. Definitions. The explanation or definition of terms and abbreviations commonly used in the aviation community can be found in FAR Part 1; *DoD FLIP General Planning (*Chapter 2), and Joint Pub 1-02, *The DOD Dictionary of Military and Associated Terms.* See **Attachment 1** for common terms use in this instruction.

1.9. Aircrew Operational Reports . The reporting requirements in this instruction are exempt from licensing in accordance with paragraph 2.11.10 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections.*

Chapter 2

COMMAND AND CONTROL

2.1. General . AMC/CC has command of 89 AW airlift forces. The Vice Chief of Staff (HQ USAF/CV) is responsible for scheduling SAM aircraft. Aircraft and crews of the 89 AW are outside the normal command authority of the AMC command and control (C2) system. Command authority is delegated directly from the AMC Commander to the 89 AW commander. The Military Assistant to the President has operational control of Presidential aircraft and delegates command authority to the Presidential AC.

2.1.1. NOTE. SAM scheduling authority is specified in DoD 4515.13R, *Air Transportation Eligibility.*

2.1.2. Command and Control. Through the Andrews Command Post, the 89th Operations Support Squadron, acts as executive agent for the 89 AW commander on C2 matters. The 89 AW Current Operations Branch (89 OG/OGO) acts as liaison between ACs and the mission tasking authority through the Andrews Command Post.

2.2. Execution Authority . Execution approval originates at HQ USAF/CVAM, US Air Force for 89 AW SAMs. All requirements involving movement of 89 AW SAM aircraft are coordinated with HQ USAF/CVAM. 89 OG/OGO acts as the single point of contact within the 89 AW for mission assignments from HQ USAF/CVAM and TACC. 89 OG/OGO acts as executive agent for the 89 AW commander to ensure missions are planned and executed as scheduled. During the mission planning phase, 89 OG/OGO acts as liaison between the AC and the mission tasking authority.

2.2.1. SENEX. Execution approval for SENEX is defined in Operations Order (OPORD) 9468-87, SENEX Concept of Operations.

2.2.2. Training Missions/Off Station Training Flights. Execution approval for local training missions will be the squadron commander in accordance with the mission and alert requirements levied by the agencies specified in paragraph **2.2.** 89AW/CC is the approval authority for off station trainers in coordination with HQ USAF/CVAM. Prior to approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Commanders approving off station trainers will forward a copy of the planned itinerary to the appropriate NAF/DO and MAJCOM/DOT.

2.3. Aircraft Commander Responsibility and Authority. An aircraft commander is designated for all flights on the flight authorizations in accordance with AFI 11-401, *Flight Management* and applicable MAJCOM supplement. Aircraft commanders are:

2.3.1. In command of all persons aboard the aircraft.

2.3.2. Responsible for the welfare of the crew and the safe accomplishment of the mission.

2.3.3. Vested with the authority necessary to manage crew resources and accomplish the mission.

2.3.4. The final mission authority and will make decisions not specifically assigned to higher authority.

2.3.5. The final authority for requesting or accepting any waivers affecting the crew or mission.

2.3.6. Responsible for ensuring that only activity authorized by the executing authority is accomplished, unless emergency conditions dictate otherwise.

2.3.7. Through 89 OG/OGO, charged to keep the 89 AW commander and applicable C2 agency informed concerning mission progress and difficulties.

2.4. Mission Clearance Decision. The AC has final responsibility for safe conduct of the mission. The AC possesses full authority for all mission operational decisions. Conduct all flights with the priorities of SAFETY *first*, passenger COMFORT *second*, and schedule RELIABILITY *third.*

2.4.1. Mission Confirmation. On or prior to the first leg of each mission, the AC must review the exact mission itinerary, specific landing locations, and other applicable mission requirements with the on-board contact. If discrepancies arise, the AC will advise the contact to pass the proposed changes to HQ USAF/CVAM for approval/disapproval. In addition the AC should pass the request to 89 OG/OGO for resolution with HQ USAF/CVAM.

2.4.2. Reroutes and Diverts. ACs may reroute or divert their missions if required due to emergency situations or adverse weather. Attempt to coordinate SAM mission diversions in advance with HQ USAF/CVAM through 89 OG/OGO. When directing an aircraft to an alternate airfield, the C2 Center agency will ensure the aircraft commander is provided existing and forecast weather for the alternate and appropriate airfield information from the ASRR. If the planned alternate becomes unsuitable while en route, the aircraft commander will coordinate with the C2 Center for other suitable alternates. The C2 Center agency will coordinate with customs and ground service agencies to prepare for arrival. The aircraft commander is final authority on selecting a suitable alternate.

2.4.3. Mission Changes. Reroutes or other itinerary changes requested by the DV on en route SAM missions must be coordinated with 89 OG/OGO for approval/disapproval by HQ USAF/CVAM. In no case will the aircraft commander change the SAM mission itinerary until approved by HQ USAF/CVAM. If itinerary changes by 1 hour or more, an itinerary change message must be sent by the aircrew to all affected agencies.

2.4.4. Divert Coordination. In the event of an emergency diversion to an alternate, the AC coordinates all border clearance and aircraft servicing requirements. The Andrews Command Post assists the AC when requested. The AC will also provide DV and party with all necessary assistance, including obtaining transportation and lodging. See **Chapter 6** and **Chapter 10** of this AFI for specific procedures.

2.5. Aircrew Responsibilities. The aircraft commander is the focal point for interaction between aircrew and mission support personnel. Aircraft commanders must inform the appropriate C2 through 89 OG/OGO of any factors that may affect mission accomplishment. The 89 AW commander delegates primary responsibility for mission management to the AC, through the 89 OG/CC. ACs, as representatives of the 89 AW commander, are the final authority for all operational matters pertaining to their aircraft, crew, and mission.

2.5.1. Aircrew Availability. At en route stations, mission itineraries are subject to change on short notice, and crews may be diverted to support another DV or mission. Unless directed otherwise, 89 AW aircrews are not required to maintain a standby/alert status during scheduled ground times; however, all ACs must be aware of crewmembers planned activities and locations during the entire ground time.

2.6. Operational C2 Reporting. Report all mission movement information to Andrews Command Post. As soon as possible or as soon as communications capabilities exist, the aircraft commander will ensure all departure/arrival times, fuel burned, maintenance codes, and any other pertinent information are passed to the Command Post after each leg.

2.6.1. Unusual Circumstances. Notify 89 OG/OGO and HQ USAF/CVAM immediately through Andrews Command Post of any unusual occurrence.

2.6.2. Crew Location. Notify the Andrews Command Post of aircrew location and telephone number during each crew rest and during any other ground time when the crew will leave the immediate vicinity of the aircraft.

2.6.3. SENEX Reporting. Report arrivals or departures and mission information to the SENEX controller according to current SENEX guidance.

2.6.4. DV Messages. Airborne unclassified messages originated by DV passengers may be transmitted at the discretion of the aircraft commander.

2.7. Mission Responsibilities.

2.7.1. Mission Planning. 89 OG/OGO acts as the single point of contact within the 89 AW for mission assignments from HQ USAF/CVAM and TACC. 89 OG/OGO acts as executive agent for the 89 AW commander to ensure missions are planned and executed as scheduled. During the mission planning phase, 89 OG/OGO acts as liaison between the AC and the mission tasking authority.

2.7.1.1. For all multi-ship operations, (e.g., funeral runs, summits), 89 OG/CC will ensure, through the 89 OG/OGO, that an appropriate level of ground/flight supervision is provided for the entire mission. Emphasis should be placed on who is the overall mission commander for the operation.

2.7.2. Mission Management. The 89 AW commander delegates primary responsibility for mission management to the AC, through the 89 OG/CC.

2.8. (Not Used).

2.9. C2 Agency Telephone Numbers. Units should publish a listing of telephone numbers to assist crews in coordinating mission requirements through appropriate C2 agencies. It should be made readily available to crews by publishing it in the FCB, Read File, or other appropriate publications.

Chapter 3

CREW MANAGEMENT

3.1. Aircrew Qualification. Primary crew members or those occupying a primary position during flight must be qualified (current and valid AF Form 8, **Certificate of Aircrew Evaluation**) or in training for qualification for that crew position. If non-current, or in training for a particular event, the crew member must be under the supervision of an instructor while accomplishing takeoff, air refueling, approaches and landings. **EXCEPTION**. The Chairman of the Joint Chiefs of Staff, the Vice Chairman of the Joint Chiefs of Staff, the Air Force Chief of Staff, the Air Force Vice Chief of Staff, and the AMC Commander are the only senior staff members authorized to perform pilot duties on 89 AW aircraft.

3.1.1. They must be rated Air Force pilots and comply with AFI 11-401.

3.1.2. Pilots.

3.1.2.1. Missions with Passengers. With passengers on board, takeoff, climb-out, flight under actual instrument conditions, approach, and landing may be made by any qualified (current and valid AF Form 8, for MDS-specific aircraft) pilot. Only a pilot that is qualified will occupy a pilot's seat with passengers onboard the aircraft. One of the following conditions must be met:

3.1.2.1.1. Two qualified and current pilots (1 AC or higher, 1 copilot or higher) must be at the controls.

3.1.2.1.2. A qualified pilot non-current no more than 60 days for mission requirements and an IP providing direct supervision must be at the controls (ACs regaining mission currency will be designated in command).

3.1.2.1.3. A qualified copilot accomplishing phase II qualification training and an IP providing direct supervision must be at the controls.

3.1.2.1.4. A qualified AC upgrade candidate on an initial or requalification Operational Mission Evaluation (OME) and a qualified copilot under supervision of a qualified flight examiner must be at the controls (AC upgrade candidates will be designated in command).

3.1.2.1.5. A basic qualified (valid AF Form 8 in MDS-specific aircraft) General Officer and an IP providing direct supervision must be at the controls.

NOTE. Touch-and-go landings with passengers are prohibited.

3.1.2.2. Qualification Training. Initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers onboard. Mission qualification training, operational mission evaluations, and line training/development missions may be conducted on missions with passengers onboard only if the individual in training is qualified at the applicable level.

3.1.2.3. Local Training and Evaluation Missions. Non-current or unqualified pilots may perform crew duties under the supervision of a qualified instructor or examiner. If passengers are carried, paragraph **3.1.2.1.** applies.

3.1.2.4. NOTE. Maintenance specialists flying for the purpose of conducting in-flight maintenance inspections are exempt from the restrictions in paragraphs **3.1.2.1.** through **3.1.2.4.** These specialists should be deplaned as soon as practical upon completion of the in-flight inspection.

3.1.3. Other Crewmembers. Other non-current or unqualified crewmembers who are assigned in the aircraft may be assigned in addition to the minimum complement of qualified and current primary crewmembers and may perform duties in their designated crew position when under the supervision of a current instructor or examiner qualified in the respective crew position (direct supervision for critical phases of flight). Non-current or unqualified crewmembers may fill a primary crew position under the supervision of a flight examiner (direct supervision for critical phases of flight) during flight evaluations in accordance with AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*. At the AC's discretion, the instructor or examiner may be required to assume the primary crew position during critical phases of flight or adverse conditions.

3.1.4. Qualified copilots may perform pilot or copilot duties under the supervision of a current instructor or examiner during Phase II mission qualification training according to the applicable operations-series directives.

3.2. Crew Complement. Minimum crew complement for basic and augmented flight duty periods (FDP) are in **Table 3.1.**.

Table 3.1. Crew Complement.

Crew Position	**Basic**					**Augmented**		
	C-9	**C-20/37**	**C-32**	**C-137**	**VC-25 A**	**C-32**	**C-137**	**VC-25 A**
Aircraft Commander	1	1	1	1	1	2	2	2
First Pilot	1	1	1	1	1	1	1	1
Navigator (*Note* 3.2.1.1.and 3.2.1.8.)				1	1		2	2
FE or FM	1 (*Note* 3.2.1.2.)	1 (*Note* 3.2.1.2.)		2 (*Note* 3.2.1.3.)	2 (*Note* 3.2.1.3.)		2 (*Note* 3.2.1.4.)	2 (*Note* 3.2.1.4.)
CSO (*Note* 3.2.1.1. and 3.2.1.8.)	1	1	1	2	4(Note 3.2.1.7.)	2	2	4(Note 3.2.1.7)
F/A (*Note* 3.2.1.1.and 3.2.1.8.)	2 (Note 3.2.1.6.)	1	4 (Note 3.2.1.5.)	4 (Note 3.2.1.5.)	10	(*Note* 3.2.1.6.)	(*Note* 3.2.1.6.)	10
Crew Chief (*Note* 3.2.1.1. and 3.2.1.8)			2	1	1	2	1	1
Crypto Maintenance (*Note* 3.2.1.1.and 3.2.1.8)				1	1		1	1

3.2.1. NOTE.

3.2.1.1. Not required for local training missions.

3.2.1.2. Not required for local training missions, provided a qualified observer is aboard.

3.2.1.3. One must be first flight engineer qualified or higher.

3.2.1.4. Both must be first flight engineer qualified or higher.

3.2.1.5. The 89 OG/CC (or PPO/CC for Presidential Missions) may waive the basic crew to 2 Flight Attendants when the passenger load is less than 20. Minimum of one MAB qualified.

3.2.1.6. The 89 OG/CC (or PPO/CC for Presidential Missions) may waive the augmented crew to 4 Flight Attendants for reduce passenger loads. Minimum of one MAB qualified.

3.2.1.7. Only 3 CSOs required when Crypto Maintenance is flying.

3.2.1.8. Presidential Pilot will determine crew complement on Presidential Missions.

3.2.2. Augmented crews are required when a mission cannot be completed within a basic FDP. All C-137 and C-32 crews scheduled to depart the CONUS will be augmented regardless of the planned FDP. The 89 OG/OGO may waive this requirement with the concurrence of HQ USAF/CVAM. Augmentees must be current and qualified in the aircraft. Non-mission-ready (NMR) crewmembers who require instructor supervision will not be used as augmentees. In those situations requiring augmentation, the crew must be augmented from the start of the duty period. MAJCOM/DO approval is required for additional crewmembers to join the mission en route for augmentation. If augmentees are added to the crew, the crew's FDP will be computed based on the FDP of the most limited person.

NOTE. C-9, C-37, and C-20 aircraft will not be augmented.

3.2.3. For all passenger missions, do not schedule crew complements that exceed the maximum crew capacity specified for a particular aircraft configuration. If not specified, do not schedule crewmembers who will require seating normally available to passengers, regardless of the planned passenger load. Exceptions to this policy may be granted by Current Operations (89 OG/OGO) with the concurrence of CVAM.

3.3. Scheduling Restrictions. Crew members will not be scheduled to fly nor will they perform crew duties:

3.3.1. When the maximum flying time limitations of AFI 11-202, Volume 3 will be exceeded.

3.3.2. After consuming alcoholic beverages within 12 hours of takeoff or when under the influence of alcohol.

3.3.3. After consuming alcoholic beverages within the 12-hour period prior to assuming alert/standby force duty.

3.3.4. Within 72 hours of donating blood. The flying unit commander must approve the donation of blood by crew members in a mobility assignment or who are subject to flying duties within this 72 hour period. Crew members should not normally donate blood.

3.3.5. When taking oral or injected medication unless individual medical waiver has been granted by the Command Surgeon. Crew members may not self medicate except IAW AFI 48-123, *Medical Examination and Standards.*

3.3.6. The following is a partial list of medications which may be used without medical consultation:

3.3.6.1. Skin antiseptics, topical anti-fungals, 1 percent Hydrocortisone cream, or benzoyl peroxide for minor wounds and skin diseases which do not interfere with the performance of flying duties or wear of personal equipment.

3.3.6.2. Single doses of over-the-counter aspirin, acetaminophen or ibuprofen to provide analgesia for minor self-limiting conditions.

3.3.6.3. Antacids for mild isolated episodes of indigestion.

3.3.6.4. Hemorrhoidal suppositories.

3.3.6.5. Bismuth subsalicylate for mild cases of diarrhea.

3.3.6.6. Oxymetazoline or phenylephrine nasal sprays may be used by aircrew as "get me downs" should unexpected ear or sinus block occur during flight. These should not be used to treat symptoms of head congestion existing prior to flight.

3.3.7. Within 24 hours of compressed gas diving (including scuba); surface supplied diving, or hyperbaric (compression) chamber exposure and aircraft pressurization checks that exceed 10 minutes duration.

3.3.8. Within 12 hours after completion of a hypobaric (altitude) chamber flight above 25,000 feet. Personnel may fly as passengers in aircraft during this period, provided the planned mission will maintain a cabin altitude of 10,000 feet MSL or less. For altitude chamber flights to a maximum altitude of 25,000 feet or below, aircrew members may fly without delay as crew members or passengers if their cabin altitude does not exceed 15,000 feet.

3.3.9. Aircrew members who received care or who have engaged in activitites that may reduce crew efficiency are scheduled to fly only with the concurrence of a flight surgeon.

3.4. Alerting Procedures. Self-alerting procedures are normally used for all missions. The AC sets the crew reporting time and location. Home-station departure show time will normally be 2+00 prior to scheduled takeoff time. Aircraft commanders may change the home station reporting time as necessary if coordinated and approved by Current Operations. Normally, off-station crew reporting time is no later than 2 hours prior to scheduled departure time. The AC may establish other reporting times as required for mission accomplishment, e.g. scheduled mission departure time changes, increased travel time from hotel to plane, customs, etc.

3.5. Stage Management. 89th missions utilize stage crews. When a stage crew is needed due to flight duty period limitations, maintenance difficulties, etc., coordinate with 89 OG/OGO and HQ USAF/CVAM to validate the requirement and assist in determining transportation requirements, in place times, mission specific details, etc.

3.6. Crew Duty Time (CDT) and Flight Duty Period (FDP). CDT is the amount of time an aircrew may perform combined flight and ground duties. FDP is the time period between mission reporting and final aircraft engine shutdown. For planning purposes, CDT normally consists of FDP plus 45 minutes, not to exceed the maximum CDT. When post flight duties exceed 45 minutes, CDT is FDP plus the time required to complete the post-flight related duties.

3.6.1. NOTE: CDT/FDP includes both military duty and civilian work. It begins when the individual reports for his or her first duty period (military or civilian) and ends at engine shutdown at the end of the mission or series of missions.

3.6.2. CDT and FDP both begin at the scheduled crew reporting time except for the following.

3.6.2.1. Early Reporting. For crewmembers performing official duties prior to flight related duties, CDT/FDP begins when the crewmember reports for duty.

3.6.2.2. Alert/Standby Crews. For alert crews launched on an as-soon-as-possible basis, CDT/FDP begins when the crew is notified of the mission. For alert crews launched on other than an as-soon-as-possible basis, CDT/FDP begins when the crew reports for duty.

3.6.3. The length of FDP will be established by the mission directive or controlling C2 CENTER when the crew shows for duty. FDP will not be extended to an augmented day after a basic FDP has begun unless the crew is augmented, it is requested by the AC, and coordinated through the 89 AW/CC. FDP will not be based on crew composition, but rather on mission requirements.

3.6.4. FDP ends at mission block in time following completion of the final mission segment.

3.6.5. Normally, CDT ends 45 minutes after engine shutdown at the end of the mission. If any crew member must perform mission-related duties past 45 minutes, CDT does not end until that crew member completes these duties. These duties include up or down loading, servicing, debriefing, mission planning, etc. After mission completion, crew members will not be used for mission related duties supporting other missions; i.e., flight mechanics will not be used to service other aircraft. Post mission duties will not be performed after the maximum CDT has expired.

3.6.6. Basic Crew FDP:

3.6.6.1. Maximum FDP for a basic crew is 16 hours. The basic FDP is 12 hours without an operative autopilot pitch axis.

3.6.6.2. Maximum CDT for a basic crew is 18 hours.

3.6.7. Augmented Crew FDP:

3.6.7.1. Maximum FDP for an augmented crew (operational missions only) is 24 hours. FDP is 16 hours without an operative autopilot pitch axis. Only the pilot portion of the crew need be augmented when the autopilot is inoperative.

3.6.7.2. Basic crews will not be augmented after FDP has started. **EXCEPTION:** See paragraph **3.2.2.**

3.6.7.3. Maximum CDT for augmented crews is 24+45 hours.

3.6.8. Training FDP:

3.6.8.1. Maximum FDP for training missions is 16 hours.

3.6.8.2. Training events (i.e., multiple patterns, approaches, landings or air refueling) must be completed during the first 12 hours of the training FDP. ***NOTE:*** This in no case prevents missions from continuing to home station or deployed staging base once training events are accomplished (not to exceed 16 hours with an operative autopilot pitch axis). Training duty day begins at the start of CDT. Transition training for flight evaluations must be completed during the first 12 hours of the FDP.

3.6.9. If the autopilot fails after departure, notify the 89 OG/OGO through the Andrews AFB command post, continue to the next stop, and comply with the preceding limitations upon reaching the next destination.

3.6.10. Deadhead Time. Duty time for crew members in passenger status, positioning or depositioning for a mission or mission support function. Deadhead crewmembers will not exceed an augmented FDP.

3.6.10.1. Crew members may perform primary crew duties after deadheading if they will not exceed a basic FDP for the mission to be flown beginning at reporting time for the deadhead flight.

3.6.10.2. Crew members may deadhead following primary crew duties if they will not exceed an augmented FDP beginning at reporting time for primary crew duties.

3.6.11. Waiver Authority. During the mission planning or execution phase, after considering the safety and capability of their crew, aircraft commanders may request a waiver from 89 AW/CC through the 89 OG/CC.

3.6.11.1. NOTE: The Presidential AC is waiver authority for Presidential missions.

3.6.12. Flight examiners administering evaluations will not exceed an augmented FDP.

3.7. Crew Rest. Crew members will enter crew rest a minimum of 12 hours prior to alert time or, when self alerting, 12 hours prior to reporting time. HQ AMC/DO may waive all or any part of a crew rest period IAW AFI 11-202, Volume 3.

3.7.1. NOTE: 89 AW/CC is delegated waiver authority for 89 AW missions.

3.7.2. Home-Station Pre-departure Crew Rest. All primary and deadhead crew members should enter crew rest 24 hours before planned alert time for missions scheduled away from home station for more than 16 hours. Crew members may perform limited non-flying duties, including mission planning, etc. during the first 12 hours of this period. OG/CC is waiver authority for the first 12 hour Pre-departure Crew Rest. Deadhead crew members will not be manifested as passengers to reduce or eliminate crew rest requirements.

3.7.3. En Route Crew Rest and Ground Time:

3.7.3.1. Crew rest normally begins 45 minutes after final engine shutdown. The 45-minute time period provides crews with time to complete normal post-flight duties. These duties include, but are not limited to, refueling, repositioning, performing maintenance, or completing mission debriefings.

3.7.3.2. If any crew member must stay at the aircraft past the 45-minute period, crew rest does not begin until he or she has completed these post-flight duties.

3.7.3.3. Minimum crew rest period is 12 hours. This period provides the crew a minimum of 8 hours of uninterrupted rest plus time for transportation, free time, and meals.

3.7.3.4. A minimum 15+ 45 hour ground time between engine shutdown and mission takeoff should normally be planned unless extended post flight duties are anticipated.

3.7.3.5. The aircraft commander may modify normal ground time:

3.7.3.5.1. In the interest of safety.

3.7.3.5.2. When the mission is behind schedule or when requested by the DV, approved by CVAM and in accordance with AFI 11-202, Volume 3.

3.7.3.5.3. To no less than 12 hours from mission arrival time until mission departure time. Before reducing normal ground time consider mission preparation time and other factors peculiar to the mission. In no case will the crew be required to depart with less than 12 hours of ground time without 89 AW/CC approval through the 89 OG/CC.

3.7.3.5.3.1. NOTE. All modifications should be coordinated with 89 OG/OGO.

3.7.3.5.3.2. NOTE. The Presidential AC is the waiver authority for Presidential missions.

3.7.4. Post-Mission Crew Rest (PMCR).

3.7.4.1. Crew members, returning to their home base, will be given sufficient time to recover from the cumulative effects of their deployed mission and tend to personal needs. PMCR begins immediately on mission termination.

3.7.4.2. Provide one hour of PMCR time (up to a maximum of 96 hours) for each 3 hours TDY when the duty exceeds 16 hours away from home station. This time is in addition to and will not run concurrently with pre-departure crew rest. (Not applicable to continuing missions.)

3.7.4.3. The OG/CC or acting representative is designated PMCR waiver authority and will not delegate this authority below the OG/CC level. Limit PMCR waivers to extraordinary circumstances only and must not be used for day-to-day operations.

3.7.5. Flying Crew Chief/Aircraft Security NCO (ASNCO) Work and Rest Plan. For 89 AW off-station missions, crew chiefs and ASNCOs are responsible to the aircraft commander and only the aircraft commander. The aircraft commander and EAC will determine how long crew chiefs and ASNCOs can safely perform duties. Crew chiefs and ASNCOs must have the opportunity to sleep 8 hours in each 24-hour period. See AFI 21-101 for further crew chief guidance.

3.7.5.1. CDT/FDP limitations do not apply to ASNCOs, crew chiefs, and other crewmembers assigned specifically to perform ground duties.

3.7.6. Crew rest waivers approved for exercises and contingencies will be published in the OPORD or OPLAN or CONOPS.

3.8. Standby/Alert Force Duty.

3.8.1. Standby/Alert Duty. Schedule standby/alert crews as required by 89 OG/OGO and HQ USAF/CVAM. Certain 89 AW MDS specific aircraft may not have a standby/alert requirement.

3.8.1.1. Standby/alert crews should perform standby/alert duty at home. At their discretion, standby/alert crewmembers are permitted to perform up to 4 hours of on-base duties each 24 hour standby/alert period; they are not limited to staying at home for their entire duty period. Alert crewmembers quartered off base may be required to perform alert duty on base if travel time between quarters and the alert aircraft jeopardizes alert reaction time. Assigning quarters on base must be coordinated through the squadron operations officer.

3.8.1.2. The primary method of contact will always be the telephone, if a crewmember is not at home during standby/alert duty, they should provide the squadron with a contact phone number. Pagers/beepers and cell phones will only be used as a backup method of contact.

3.8.1.3. Commanders will not require crewmembers to perform any duties other than standby/alert duty during the standby/alert period. Performing standby/alert duty does not alleviate crewmembers from completing prior assigned tasks or suspense-defined projects.

3.8.2. Crew Rest. Crew members are given 12 hours of pre-standby/alert crew rest. Crews are legal for mission reporting after pre-standby/alert crew rest. Preflight duties, if required, interrupt crew

rest. In no case will a crewmember be placed on standby/alert duty within 12 hours of the previous flight duty period.

3.8.3. Standby/Alert Force Crew Management:

3.8.3.1. Schedule standby/alert crews to have the most flexible crew complement for the maximum applicable CDT/FDP. For example, the C-137/C-32 aircraft should schedule an augmented crew for standby/alert. Notify 89 OG/OGO if any part of a crew complement cannot be manned at the applicable manning level.

3.8.3.2. HQ USAF/CVAM through 89 OG/OGO will determine the aircraft alert requirement, while the respective squadron will have a crew available for that MDS and a backup aircraft if required.

3.8.3.3. Standby/alert crewmembers will not fly local missions while on alert. Other aircrews may be used for contingency missions if crew rest and CDT/FDP limitations per this AFI are taken into consideration. Designated standby/alert crews are to be used when a specific requirement is established by 89 OG/OGO or HQ USAF/CVAM.

3.8.3.4. The normal tour of standby/alert crew duty is 24 hours. Crewmembers will not be scheduled for more than 3 consecutive 24 hour periods of standby/alert duty.

3.8.3.5. According to AFI 11-202V3, AMC/DO may waive all or any part of a crew rest period. Post standby/alert crew rest waiver procedures are the same as post mission crew rest waiver procedures contained in paragraph 3.7.4.3.3.8.4. Post-Standby/Alert Missions. On completion of standby/alert duty, aircrew members may be dispatched on a mission.

3.8.4. Standby/alert duty and pre-departure crew rest may be concurrent if notification is provided at least 12 hours prior to mission reporting.

3.8.4.1. If started, post-standby/alert crew rest must be completed before the start of pre-departure crew rest.

3.8.4.2. If an aircrew member is dispatched on a mission, compute the post-mission crew rest time on standby/alert time plus mission time.

3.8.5. Post-Standby/Alert Crew Rest. Aircrew members not dispatched on a mission following standby/alert duty will receive post-mission standby/alert crew rest as follows:

3.8.5.1. If standby/alert duty is performed away from normal quarters, crew rest time is computed from this standby/alert time on the same basis as for mission time.

3.8.5.2. If standby/alert duty was performed in normal quarters, no crew rest time is authorized.

3.9. Orientation Flights and Incentive Flights. Refer to DoD 4515.13R, AFI 11-401, and the appropriate MAJCOM supplement. If a military member is authorized to accompany unit aircraft as a part of the incentive program, comply with appropriate procedures for processing.

3.10. Supplemental Training Mission (STM). Opportune airlift of cargo and mission personnel may be accomplished as a by-product of crew training missions. STMs may be authorized when minor adjustments can be made to a scheduled training mission or when a productive aircrew training mission can be generated for the airlift. The training mission will not be degraded in any manner to accomplish the STM. Use of STMs for logistical support will be authorized only when normal military or commercial transpor-

tation modes are unable to provide required support. STMs may be approved by the operations group commander with wing commander coordination. On STMs aircraft commanders will release maximum number of space available seats commensurate with mission requirements and safety.

3.11. Off Station Training Flights. The 89 AW/CC through the 89 OG/CC, in coordination with HQ USAF/CVAM, is the approval authority for off station trainers. Prior to approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Commanders approving off station trainers will forward a copy of the planned itinerary to the appropriate NAF/DO, AMC/DOT, and HQ USAF/CVAM.

3.12. Interfly. The term "interfly" is the exchange and/or substitution of aircrew members and/or aircraft between mobility units to accomplish flying missions. During contingencies, exercises, or designated missions, interfly operations will be conducted according to the appropriate OPLAN or concept of operations.

3.12.1. 89 OG/CC may authorize the interfly of assigned aircrews and/or aircraft. Normally, interfly should be limited to specific operations, exercises, or special circumstances but, may be used to relieve short-term qualified manpower shortfalls. Long-term interfly arrangements may be found in command-to-command memorandum of agreements (MOA) or similar-type documents. Associate Reserve units and active duty HQ Staff/NAF evaluation or inspection teams have existing interfly arrangements.

3.12.2. Interfly is authorized under the following conditions:

3.12.2.1. Aircraft ownership will not be transferred.

3.12.2.2. As a minimum, crews will be qualified/certified in the MDS and model as well as systems/configuration required to fly the aircraft and/or mission.

3.12.2.3. Crew member(s), using interfly will follow "basic" operational procedures (see paragraph **1.4.3.**).

3.12.2.4. Initiate interfly approval request by the unit or agency requesting the agreement by memo or message format to the OG/CC controlling the resource. Each commander with resources (personnel or aircraft) and MAJCOM, if appropriate must concur with the intention to interfly.

3.12.2.5. Request must include details of the deployment or mission including; aircrew name(s), duration, or special circumstances.

3.12.2.6. Flight Mishap accountability is MAJCOM designated by PEID code for mishap aircraft.

3.12.2.7. Ground Mishap accountability in accordance with AFI 91-204, *Safety Investigations and Reports*.

Chapter 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. Objective. The ultimate objective of the aircraft maintenance team is to provide an aircraft for launch with all equipment operational (Fully Mission Capable, FMC). Manpower limitations, skills, and spare part availability have a negative and direct impact on accomplishment. However, some redundant systems allow safe operation with less than all equipment operational for certain missions under specific circumstances. The aircraft commander, using the following policies, determines an aircraft's overall status. Use the following maintenance identifiers to effectively communicate an aircraft's status:

4.1.1. Mission Essential (ME). An item, system, or subsystem component essential for safe aircraft operation or mission completion will be designated Mission-Essential (ME) by the aircraft commander in AFTO Form 781A, Maintenance Discrepancy and Work Document. Include a brief explanation of the reason for ME status in the AFTO Form 781A discrepancy block. An aircraft commander accepting an aircraft (one mission or mission segment) without an item or system does not commit that aircraft commander (or a different aircraft commander) to subsequent operations with the same item or system inoperative.

4.1.2. Mission Capable (MC). Any discrepancies that are not currently ME, but may become ME (if circumstances change), are designated as MC in the AFTO Form 781A discrepancy block. Every effort will be made to clear the MC discrepancies at the earliest opportunity to the extent that maintenance skills, ground time, and spare part availability permit. If subsequently, in the AC's judgment, mission safety would be compromised by the lack of any component, he may re-designate the said component as ME. However, do not delay a mission to correct an MC discrepancy.

4.1.3. Open Item. Discrepancies not expected to adversely impact the current mission or any subsequent mission are not designated MC or ME. These items receive low priority and are normally worked at home station. Do not accept an aircraft from factories, modification centers, or depots unless all instruments are installed and operative.

4.1.4. Engine performance, aircraft attitude, vertical velocity indications, altitude, speed, and heading instruments should be operative in both pilot positions. For instruments with both analog and digital displays, either the analog or digital presentation is acceptable.

4.2. Policy. It would be impractical to prepare a list that would anticipate all possible combinations of equipment malfunction and contingent circumstances. This chapter lists the equipment and systems considered essential for routine as well as contingency operations. The list does not necessarily include all equipment or systems essential to airworthiness (e.g. rudder, ailerons, elevators, flaps, tires, etc.). Those items which state a minimum requirement and have no listed exceptions are grounding items.

4.2.1. NOTE. The Presidential Pilot has waiver authority for MEL restrictions on Presidential Aircraft.

4.2.2. NOTE. Aircraft Commanders must refer to their aircraft MEL (or aircraft's manufacturers MMEL) for inoperative systems before dispatch. Deviations must be approved by the 89 OG/CC (or PPO/CC for presidential missions) prior to departure. HQ AMC/DOV must be informed of all granted deviations within 24 hours of departure.

4.2.3. The aircraft commander is responsible for exercising the necessary judgment to ensure aircraft are not dispatched with multiple items inoperative that may result in an unsafe degradation and/or an undue increase in crew workload. The possibility of additional failures during continued operation with inoperative systems or components shall also be considered. This chapter is not intended to allow for continued operation of the aircraft for an indefinite period with systems/subsystems inoperative.

4.2.4. If, after exploring all options, an aircraft commander determines a safe launch is possible with an item inoperable (beyond a particular restriction) the aircraft commander shall request a waiver. Use C2 channels to notify the appropriate execution agency of intentions. Plan a minimum 1-hour response to the waiver request.

4.2.5. Off-Station Maintenance Difficulties. ACs with maintenance difficulties away from home station will coordinate all requirements for supply and maintenance assistance with local support agencies. Keep 89 OG/OGO informed of current aircraft status through command post channels. If an aircraft arrives at any station with a maintenance status that would prevent or delay departure, the AC will take whatever action is necessary to have aircraft restored to Mission Ready (MR) status as soon as possible after landing, regardless of scheduled ground time. Aircraft must be MR as soon as possible to support distinguished visitor (DV) schedule changes or diversion to a higher priority mission. The AC will monitor maintenance and report when the aircraft is restored to MR status.

4.2.5.1. If parts are required, advise 89 OG/OGO through the Andrews command post that supply assistance is required. The AC may be provided a local contact who can arrange for parts locally. If parts will be shipped, the command post will provide the aircrew with shipping details. Normally, parts are shipped to the AC in care of the U.S. Embassy or other mission supply activity. The AC or embassy will make arrangements to have someone pickup the shipment as soon as possible after it arrives. When the parts shipment has been received, notify the Andrews Command Post to preclude unnecessary tracing actions.

4.2.5.2. If maintenance assistance is required beyond the scope of local capabilities, advise 89 OG/OGO through the Andrews Command Post of anticipated requirements. If necessary, maintenance specialists will be sent by the most expeditious transportation means TDY from Andrews AFB.

4.2.5.3. C-137/C-32/C-9/C-37/C-20 parts are furnished by the Contractor Operated Maintenance Base Supply (COMBS) facilities. All repairable C-137/C-32/C-9/C-37/C-20 parts must be returned to the COMBS facilities. The AC will ensure the defective parts are returned to Andrews AFB upon the aircraft from which they were removed or by the most advantageous means available. The AC will relay the method of shipment and name/phone number of the local contact, if applicable, to the Andrews Command Post. Ensure the flight engineer, flight mechanic, or crew chief attaches **AFTO Form 350, Repairable Item Processing Tag** to each defective part upon removal. Coordination for supply support will be arranged through the contractors support facilities at other stations. For the C-9, standard USAF supply procedures will be used for the UHF/VHF/HF communications radios, APX-72 IFF, low pressure oxygen cylinders, life rafts/vests and the first aid kits.

4.2.6. Maintenance Delay. If a maintenance condition exists that will prevent or delay a special airlift mission (SAM) departure, the AC will advise the Andrews Command Post immediately. Depending on DV desires and the urgency of their schedule, the AC, the on-board contact, and 89 OG/OGO will

coordinate a new departure time with HQ USAF/CVAM or arrange substitute transportation if available and acceptable to the DV.

4.3. Waiver Protocol. Waiver to operate with degraded equipment exceeding this chapter will be coordinated through 89 OG/OGO, 89 OG/OGV, 89 OG/CC and PPO/CC to the 89 AW/CC.

4.3.1. Local Missions (executed by unit OG/CC or equivalent). Waiver authority for units flying local missions is the OG/CC. PPO is waiver authority for PPO locals.

4.3.2. HQ USAF/CVAM Directed Missions. Waiver authority for HQ USAF/CVAM directed missions is the 89 AW Commander.

4.4. Technical Assistance Service. The aircraft commander may request (at anytime in the decision process) technical support and additional assistance from their home unit, MAJCOM staff, and maintenance representatives.

4.4.1. Aircraft commanders electing to operate with degraded equipment or aircraft systems (with appropriate waiver) must coordinate mission requirements (i.e. revised departure times, fuel requirements, maintenance requirements, etc.) with 89 OG/OGO prior to flight.

4.4.2. When it is necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required, the aircraft commander may elect to deviate from the MEL and the requirements of chapter. Report deviations (without a pre-approved waiver), through channels to AMC/DO within 48 hours. Units must be prepared to collect background information and submit a follow-up written report upon request.

4.5. (Not Used).

4.6. One-Time Flights. If an aircraft has a safety-of-flight condition beyond the immediate or final repair capability of an en route facility, temporary repairs may be made to allow a one-time flight to a pre-selected facility capable of final repair.

4.6.1. AC's Recommendation. ACs will send their recommendations to 89 OG/OGO through the Andrews Command Post.

4.6.2. Approval Authority. If a one-time flight is considered feasible, 89 OG/OGO will coordinate with the 89 OG/CC or PPO/CC, who has approval authority. Approval will include flight restrictions and designated repair facility.

Chapter 5

OPERATIONAL PROCEDURES

5.1. Checklists. 89 AW MDS specific checklists are designed as clean up checklists, and items may be accomplished prior to the checklist being read. A checklist is not complete until all items have been accomplished. Momentary hesitations for coordination items, ATC interruptions, and deviations specified in the flight manual, etc., are authorized. Notes amplifying checklist procedures or limitations may be added to the checklists (in pencil).

5.1.1. Checklist Inserts. Units may supplement T.O. guidance (for example Secure Communications) with HQ AMC/DOV approved checklist inserts. These inserts may be placed at the end of the appropriate checklist or in an in-flight guide. All checklist inserts must have a POC. If any crewmember has recommendations or changes they should contact the POC. The POC will consolidate inputs and submit changes to HQ AMC/DOV for approval through 89 OG/OGV. Local in-flight guides and inserts not affecting T.O. guidance and procedures may be locally approved by OGV.

NOTES:

1. Commercial manuals are considered T.O. guidance.
2. The 89 AW Flight Operations Manual (FOM) for the C-32A is authorized. HQ AMC/DOV will be responsible for the maintenance and update of the 89th FOM. All changes to this FOM will parallel procedures outlined in AFI 11-215 for Technical Orders. AF Form 847s will be processed through the chain of command.

5.2. Duty Station. A qualified pilot will be in control of the aircraft at all times during flight. **EXCEPTION:** Unqualified pilots undergoing qualification training and senior staff members who have completed the Senior Staff Familiarization Course). Crewmembers will be at their assigned stations from takeoff to landing except when duties require absence from their stations and in connection with physiological needs. Crewmembers will notify the aircraft commander prior to departing assigned primary duty station.

5.3. Flight Station Entry. Aircraft commanders may authorize passengers, and observers access to the flight station during all phases of flight. In all cases, sufficient oxygen sources must be available to meet the requirements of AFI 11-202, Volume 3. Passengers and observers will not be permitted access to the pilot, copilot, or flight engineer position regardless of its availability.

5.4. Takeoff and Landing Policy. After thoroughly evaluating all conditions, the aircraft commander will determine who accomplishes the takeoff and landing and occupy either the left or the right seat during all takeoffs and landings.

5.4.1. AC Takeoff and Landing Policy. A qualified and current pilot certified as aircraft commander, instructor, or evaluator will accomplish all takeoffs, approaches, and landings:

5.4.1.1. The Presidential aircraft commander will determine takeoff and landing policy in the VC-25A.

5.4.1.1.1. When actual emergency conditions exist unless specific conditions dictate otherwise.

5.4.1.1.2. When making an actual Category II or III ILS approach.

5.4.1.1.3. When marginal weather or hostile conditions exist.

5.4.1.1.4. When operating to or from airfields requiring HQ AMC, 89 OG/CC or airfield related waivers.

5.4.1.1.5. When the AC has less than the minimum missions in-command as specified in **Table 5.1.**

Table 5.1. Missions in Command.

MDS Aircraft Type	Min Missions in Command
C-9	2 missions
C-37/C-20	2 missions
C-32/C-137	2 missions (1 overseas)

5.4.2. Missions in Command. Only 89 AW missions where the individual is certified as an AC and designated in command on the flight orders will be credited as missions in command. ACs will make all takeoffs and landings (unless the copilot is qualified as an AC or higher) until they reach the minimum missions in command as follows:

5.4.3. First Pilots Takeoff and Landing Policy. First Pilots can accomplish takeoffs and landings on any mission at the discretion of the AC using the guidance in paragraph **5.4.1.** and **5.4.2.**

5.4.4. Right-Seat Procedures. Normally, the pilot in the left seat will command gear and flap operations and the pilot in the right seat will activate the system. The right seat pilot will acknowledge the command prior to system activation. If the pilot flying the aircraft is in the right seat, that pilot should command gear and flap operations to include a go-around. The pilot not flying the aircraft will acknowledge the command prior to system activation.

5.4.4.1. NOTE: Right-seat take-off and landings are restricted to local training or evaluation flights. 89 OG/CC is the waiver authority.

5.4.4.1.1. EXCEPTION. Presidential pilot has waiver authority for presidential aircraft operations.

5.4.4.1.2. C-32 Right seat takeoffs and landings are permitted. 89 OG/CC has restricted on operational missions, right seat take-off and landings to instructor pilots or above.

5.5. (Not Used).

5.6. Outside Observer. When available, use a crewmember to assist in outside clearing during all taxi operations and any time the aircraft is below 10,000 feet AGL.

5.7. Seat Belts.

5.7.1. All occupants will have a designated seat with a seat belt. Use of seat belts will be as directed by the aircraft commander and the flight manual. When children under the age of two or below the

weight of 40 pounds and under the height of 40 inches are accepted as passengers, the parent or guardian must provide their own FAA approved Infant Car Seat (ICS). This requirement does not preclude a passenger from temporarily holding an infant during the cruise portion of the flight when safety considerations are not violated. Passengers may hand-carry infant car seats. These seats will be secured to a seat using the seat belt.

5.7.2. Crewmembers occupying primary crew positions will have seat belts fastened at all times in-flight, unless crew duties dictate otherwise.

5.7.3. All crewmembers will be seated with seat belts and shoulder harnesses fastened during taxi, takeoff, and landing, unless crew duties dictate otherwise. Crewmembers performing instructor or flight examiner duties are exempt from seat belt requirements unless they occupy a crew station; however, a seat with an operable seat belt will be available.

5.8. Aircraft Lighting. Aircraft lighting will be in accordance with AFI 11-202, Volume 3, this AFI, and applicable TOs.

5.9. Portable Electronic Devices. Comply with AFI 11-202, Volume 3.

5.9.1. Unauthorized equipment (e.g., Walkman-type radios/tape players, CD players, etc.) will not be connected to the aircraft intercom, PA or radio systems.

5.10. Smoking Restrictions. Smoking is normally prohibited on board DoD aircraft. AFI 40-102, *Smoking in Air Force Facilities*, provides an exception for smoking on 89 AW aircraft executing USAF/CVAM directed missions. Generally, smoking is not authorized on-board the aircraft unless an unusual circumstance dictates otherwise. Waiver authority is HQ USAF/CV.

5.10.1. Smoking policy. Allowance of passenger smoking on-board 89 AW aircraft will be determined by the aircraft commander when requested by and coordinated with the on-board contact. The on-board contact will make this request on behalf and with concurrence of the primary DV.

5.10.1.1. Crewmembers will not smoke on-board 89th aircraft.

5.11. Advisory Calls. Pilots will periodically announce their intentions when flying departures, arrivals, approaches, and when circumstances require deviating from normal procedures. Mandatory altitude calls include:

5.11.1. Non-precision Approaches:

5.11.1.1. 100 feet above minimum descent altitude (MDA).

5.11.1.2. "Minimums" at MDA.

5.11.1.3. "Runway in sight" (Call when the runway environment is in sight. Do not call too soon when obstructions to vision, such as fog, haze, low stratus clouds, etc., are present).

5.11.1.4. "Go-around" (Call at missed approach point if the runway environment is not in sight or if the aircraft is not in a position for a normal landing).

5.11.2. Precision Approaches:

5.11.2.1. 100 feet above decision height (DH).

5.11.2.2. "Land" (Call at DH if the runway environment is in sight and the aircraft is in a position for a normal landing).

5.11.2.3. "Go-around" (Call at DH if the runway environment is not in sight or if the aircraft is not in a position for a normal landing).

5.11.3. Category II ILS:

5.11.3.1. 100 feet above DH (using radio altimeter).

5.11.3.2. "Land" at DH (using radio altimeter) if the following are met:

5.11.3.2.1. Landing environment is in sight.

5.11.3.2.2. Airspeed is plus or minus 5 knots of the final approach speed.

5.11.3.2.3. Localizer or glide slope deviations do not exceed 1/2-dot deviation on the glide slope indicator (GSI) or course deviation indicator (CDI).

5.11.3.2.4. Aircraft track will remain within lateral confines of the runway extended.

5.11.3.3. "Go-around" at DH (using radio altimeter) if any of the tolerances above are exceeded or if the aircraft is not stabilized, with reference to glide slope, localizer, altitude, or airspeed.

5.11.4. VC-25A Category III A ILS (Use radio altimeter for all calls):

5.11.4.1. "500 feet, Landing configuration checked" at 500 feet AGL.

5.11.4.2. "400” at 400 feet AGL.

5.11.4.3. "300" at 300 feet AGL.

5.11.4.4. "200" at 200 feet AGL.

5.11.4.5. "100" at 100 feet AGL (alert height) (Do not continue if course or glideslope tolerances exceed 1/3-dot or autothrottle not engaged).

5.11.4.6. "Flare capture" or "Go-Around" at 50 feet AGL (determined by FLARE engaged annunciator).

5.11.4.7. "Rollout" at 5 feet AGL (determined by ROLLOUT engaged annunciator).

5.11.5. Climb-Out:

5.11.5.1. Transition altitude.

5.11.5.2. 1,000 feet below assigned altitude.

5.11.6. Descent:

5.11.6.1. Transition level.

5.11.6.2. 1,000 feet above assigned altitude.

5.11.6.3. 1,000 feet above initial approach fix altitude or holding altitude.

5.11.6.4. 100 feet above procedure turn and final approach fix altitude.

5.11.7. Standard C-32 Callouts/Procedures-Category I, II, III A/B ILS and Precision Approach Radar (PAR) Approaches. See **Table 5.2.** Note: only asterisk * procedures are required on PAR approaches.)

Table 5.2. C-32 Callouts.

Pilot Flying	Pilot Not Flying
Confirm localizer movement.	When localizer moves from the fully deflected position, state "localizer alive."
Confirm glide slope movement.	When the glide slope pointer moves from the fully deflected position, state "glide slope alive."
At 1000 feet above touchdown, observe instruments in agreement, any visible flags, flare/rollout armed, ASA indication. After 1000' call, state "No Autoland/Land 2/Land 3, Decision/ Alert Height _____ Feet." (Note 1)	At 1000 feet above touchdown, check instruments in agreement, any visible flags, aircraft configured for landing. After the PF call, state "checked" (Note 1)
At 500 feet above touchdown, after PNF call, crosscheck ASA indication. State "checked." (Note 1)	At 500 feet above touchdown, observe ASA indication. State "five hundred feet, No Autoland/Land 2/Land 3." (Note 1)
	* Below 500 feet above touchdown, announce deviations from bugged airspeed, descent rates greater than 1000 FPM, and deviations from instrument indications.
	* At 100 feet above decision/alert height, state "Approaching Decision Height/Alert Height," check for visual cues. From 100 feet above decision/alert height through touchdown and rollout make calls using the following guidance: If no visual cues exist, remain silent. If the landing environment is not immediately visible, but some visual cues exist, state the single word "Cues." If, or when, the runway landing environment is visible, state the single word "Visual."
* At decision height, check landing environment in sight, aircraft in a safe position to land, state "Landing/Go Around," as appropriate, **OR** At alert height, check ASA indication, state "Landing/Go-Around," as appropriate. From alert height through rollout, crosscheck ASA for a "No Autoland" indication; if this occurs, initiate a go-around and/or take manual control of the aircraft, if required, as appropriate.	* At decision/alert height, state "Decision/Alert Height." On an autoland approach the following are advisory only: At 45 feet Radar Altitude (RA) observe "Flare" engaged for pitch mode. At 25 feet RA observe "Idle" engaged for autothrottle mode and at 5 feet RA observe "Rollout" engaged for roll mode. If Idle does not occur, state "Negative Idle."
	During rollout, observe localizer display/visual cues, if aircraft drifts off centerline, state "Steer Right/Steer Left," as appropriate.
Note 1: The 1000' and 500' calls are applicable to Cat II and III ILS approaches only.	

Table 5.3. Standard C-32 Callouts/Procedures--Non-precision approaches.

Pilot Flying	Pilot Not Flying
	At 100 feet above Minimum Descent Altitude (MDA), state "Approaching Minimums." Check for visual cues. From 100 feet above MDA make calls as appropriate using the following guidance: If no visual cues exist, remain silent. If the landing environment is not immediately visible, but some visual cues exist, state the single word "Cues."
	At MDA, state "Minimums."
	When the runway environment is positively in sight, state "Visual." (Do not call too soon when obstructions to vision, such as fog, haze, low stratus clouds, etc., are present.)
Not later than the missed approach point, state "Landing/Go Around," as appropriate.	If PF has not stated "Landing/Go Around," and at the published missed approach point, state "Missed Approach Point."

5.11.8. Planned Deviations. The pilot flying the aircraft will announce any planned deviations from prescribed procedures for the approach or departure being flown.

5.11.9. Pilot Advisories. Pilots not flying the aircraft will announce any deviations from planned or prescribed procedures for the approach or departure being flown. They will also announce heading deviations, airspeed deviations of 5 knots or more below desired, and altitude deviations of 100 feet or more from desired.

5.11.10. Crewmember Advisories. Any crewmember will announce an altitude variation of 200 feet or more, an airspeed deviation of 10 knots or more below desired, or any potential terrain or obstruction clearance problem.

5.12. Communications Policy. The Air Force does not give a promise of confidentiality to aircrews regarding their recorded aircraft crew communications. Crew members are expected to maintain a high degree of cockpit professionalism and crew coordination at all times.

5.12.1. Sterile Cockpit. Limit conversation to that essential for crew coordination and mission accomplishment during taxi, takeoff, approach, landing, and any flight below 10,000 feet MSL (except cruise).

5.12.2. Communications During Takeoff. If an unsafe condition arises during takeoff before the computed V1/GO speed is reached, the crewmember observing the condition will state "ABORT." The takeoff will be discontinued in accordance with the applicable MDS specific flight manual.

5.12.3. Aircraft Interphone: Do not discuss classified information over interphone. Primary crew members will monitor interphone. Crew members will advise the aircraft commander prior to checking off interphone.

5.12.4. Command Radios:

5.12.4.1. Normally, use only one command radio, plus guard. Monitoring two controlling agencies' transmissions simultaneously is not recommended.

5.12.4.2. The pilot not flying the aircraft normally makes all ARTCC radio calls.

5.12.4.3. In terminal areas the pilot, copilot, navigator, flight engineer/flight mechanic and crewmembers at assigned stations will monitor the primary command radio unless directed otherwise.

5.12.4.4. The pilot operating the command radios will inform the crew when the primary radio is changed. Also, announce the radio (if different from the primary) on which to monitor guard.

5.12.4.5. One pilot should record and will acknowledge all air traffic control (ATC) clearances. The other pilot (except when not available during en route), navigator, or flight engineer/flight mechanic (if assigned) will monitor the read-back. This includes all transmissions pertaining to ATC instructions involving departure, en route, and approach procedures. Disregard this procedure when ATC instructions require immediate execution or when such action interferes with timely completion of more important duties.

5.12.4.6. A flight deck crewmember will monitor guard regardless of primary radio.

5.12.4.7. When the aircraft is in other than a normal configuration (for example, an engine inoperative, hydraulic or electrical malfunction, communications difficulty, etc.), the pilot will request simultaneous transmission of the controller's instructions on a backup frequency if in a terminal area under radar control.

5.12.5. Crew Resource Management (CRM) Assertive Statement "Time Out":

5.12.5.1. "Time Out" is the common assertive statement for use by all crew members. The use of "Time Out" will:

5.12.5.1.1. Provide a clear warning sign of a deviation or loss of situational awareness.

5.12.5.1.2. Provide an opportunity to break the error chain before a mishap occurs.

5.12.5.1.3. Notify all crew members that someone sees the aircraft or crew departing from established guidelines, the briefed scenario, or that someone is simply uncomfortable with the developing conditions.

5.12.5.2. As soon as possible after a "Time Out" has been called, the aircrew will take the following actions:

5.12.5.2.1. Safety permitting, stabilize the aircraft.

5.12.5.2.2. The initiating crewmember will voice his or her concerns to the crew.

5.12.5.2.3. The aircraft commander will provide all other crew members with the opportunity to voice inputs relative to the stated concerns.

5.12.5.2.4. After considering all inputs, the aircraft commander will direct the aircrew to continue the current course of action or direct a new course of action.

5.12.5.2.4.1. NOTE. The aircraft commander is the final decision authority.

5.13. Transportation of Pets. Transporting pets (dogs and cats) on 89 AW aircraft will be coordinated through HQ USAF/CVAM. Other pets or animals are normally prohibited, but may be moved according to DoD 4515.13R.

5.13.1. The Presidential Pilot determines the feasibility of transporting First Family pets on presidential aircraft.

5.14. Alcoholic Beverages. The Director of Operations (HQ AMC/DO) authorizes the dispensing of alcoholic beverages on 89 AW aircraft according to AFI 34-219, *Alcoholic Beverage Program*.

5.15. Runway, Taxiway, and Airfield Requirements use Table 5.3.

Table 5.4. Minimum Runway Length.

MDS Aircraft Type	Minimum Runway Length
C-9/C-37/C-20/C-32	5000 feet or 1525 meters
C-137C	7000 feet or 2135 meters
VC-25A	See paragraph **5.15.2.**

5.15.1. If operationally necessary, the 89 OG/CC may approve use of runways shorter than specified. Approval requires careful evaluation of aircraft and crew capabilities. Request waivers through 89 OG/OGO and 89 OG/OGV, respectively. If operations are approved, a qualified and current aircraft commander, instructor or flight examiner will make the landing and takeoff from the left seat.

5.15.1.1. C-32 aircraft will use 6000 feet or 1829 meters for touch and go landings.

5.15.2. The Presidential AC specifies minimum runway requirements for Presidential aircraft operations.

5.15.3. Runway Length for Takeoff. Do not attempt takeoff if runway available is less than critical field length or FAR field length, as applicable (Use the greater of accelerate-and-stop or accelerate-and-go distance for the C-37/C-20).

5.15.4. Runway Length for Landing. Minimum required runway for landing will be based on landing distance computed from 50 feet over threshold.

5.15.5. Compute landing distance with no reverse thrust. If operationally necessary and reported RVR (VIS) is equal to or greater than 40 (3/4 mile), landing distance for C-137 aircraft with operational 4-engine reverse capability may be computed with 2-engine reverse. If runway available for landing is still less than required, use landing ground roll plus l,000 feet if reported weather is equal to or greater than circling minimums and authorized by the 89 OG/CC. Modify approach or flare to touchdown at between 500-1000 feet of runway (refer to local policy for any OG/CC restrictions).

5.15.6. Not Used.

5.15.7. Minimum Runway and Taxiway Requirements see **Table 5.4.**

Table 5.5. Minimum Runway and Taxiway Requirements.

MDS Aircraft Type	Minimum Runway Width	Minimum Taxiway Width
C-9	90 feet (28 meters)	40 feet (See **5.15.7.1.**)
C-20/C-37	75 feet (23 meters)	25 feet (8 meters)
C-137C/C-32	98 feet (30 Meters)	50 feet (See **5.15.7.2.**)
VC-25A	See paragraph 5.15.7.1.2.	See paragraph 5.15.7.1.2.

5.15.7.1. C-9C operations: C-9 additional taxiway requirements include 90 degree turns onto a 40 foot taxiway will be from a minimum surface width of 75 feet. In addition, 90 degree turns from a 50 foot wide taxiway to a 50 foot wide taxiway are permitted.

5.15.7.2. C-32 aircraft require fillets when turning from one 50 foot wide taxiway to another.

5.15.7.2.1. The minimum runway width to complete a 180 degree turn will be 75 feet for a C-9/C-20/C-37, 140 feet for a C-137C and 120 feet for a C-32 (Consider deplaning a crewmember to safely marshal the aircraft).

5.15.7.2.2. Waiver authority for minimum runway and taxiway requirements is 89 OG/CC through the 89 OG/OGV. ***EXCEPTION***. The Presidential pilot will determine minimum runway and taxiway width requirements for PPO.

5.15.8. If takeoff end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns (if stressed and authorized) may also be used for landing if needed.

5.15.9. Aircrews and 89 OG/OGOF will contact HQ AMC/DOVS (Airfield Analysis Branch) for all questions pertaining to airfield weight bearing capability and will review the ASRR prior to all off-station operations. Waivers must be coordinated through 89 OG/OGO and 89 OG/OGV before requested to HQ AMC/DOV. See the ASRR for airfield certification requirements. 89 AW must comply with all non-aircraft specific restrictions.

5.15.10. (Not Used).

5.15.11. Takeoff or Landing Over Raised Arresting Cables. The following guidance covers BAK 9, 12, and 13 (Navy designation E-28) arresting cables, it does not include BAK 14 recessed arresting cables:

5.15.11.1. Do not land on a raised arresting cable, damage may occur to the cable or aircraft.

5.15.11.2. If the aircraft lands before a raised arresting cable and rolls over it, the flight crew should contact the tower to have the cable inspected (This does not include rolling over a cable at normal taxi speeds).

5.15.11.3. Do not takeoff or land over a raised arresting cable that has been reported as slack, loose, or improperly rigged by NOTAM, ATIS, ATC, etc.

5.15.11.4. Airfields and units may have unique local procedures for specific runway environments. MDS specific aircraft flight manuals, FLIP, NOTAMS, the summary of airfield restrictions, etc. may have additional restrictions for takeoff or landing over raised arresting cables; those restrictions take precedence.

5.15.12. Wind Restrictions. Airfields will be considered unusable for takeoff and landing when winds (including gusts) are greater than established in **Table 5.5.**

Table 5.6. Wind Restrictions.

MDS Aircraft	Maximum Wind Any Direction	Maximum Tailwind Component	Maximum Crosswind Component
VC-25A	50 knots	10 knots	Flight manual limit
C-9, C-37,C-137C, C-20	50 knots	10 knots	Flight manual limit
C-32	50 knots	15 knots	Flight manual limit

5.15.12.1. The maximum crosswind component during actual CAT II ILS approaches is 10 knots.

5.15.12.2. The maximum crosswind component during actual VC-25A automatic CAT II and CAT IIIA approaches is 15 knots.

5.15.12.3. The maximum crosswind component during actual C-32 automatic CAT II and CAT IIIA/B approaches is 25 knots.

5.15.12.4. The maximum crosswind component for practice CAT II and III ILS approaches is 15 knots (VC-25, C-137, C-9,C-20,C-37).

5.15.12.5. Do not exceed the maximum flight manual computed (per actual airfield conditions) takeoff and landing crosswind component.

5.15.12.6. C-32A wind restrictions are IAW the FOM and the Operations Manual.

5.15.13. Runway Condition Reading (RCR) or Runway Surface Condition (RSC) Restrictions:

5.15.13.1. C-9, C-20 and C-37. Maximum takeoff and landing crosswind corrected for RCR is located in **Table 5.6.**

Table 5.7. Crosswind Chart.

RCR	2	3	4	5	6	7	8	9	10	11
Crosswind Component	0	2	5	7	10	12	15	17	20	22

5.15.13.2. VC-25A, C-137. Determine RCR versus maximum allowable crosswind component from the aircraft performance manual. C-32. Determine Mu values from the FOM to define runway condition and aircraft capability. RCR equivalents to Mu values are found in the FOM.

5.15.13.3. During operations on runways partially covered with snow or ice, takeoff computations will be based on the reported RSC or RCR for the cleared portion of the runway. To ensure proper takeoff performance in the event of an engine failure, the runway should be cleared to allow for your maximum Vmcg offset (e.g., C-137 is 25 feet plus maingear offset). If your required Vmcg offset either side of centerline is not cleared to the reported RSC, then the RSC of the uncleared portion, up to your required offset, will be used for takeoff data computations.

5.15.13.4. RCR Reporting. Technical Order (TO) 33-1-23 directs that RCR information be obtained only within 20 feet of the runway centerline. Only the average RCR is reported. Many portions of the runway (laterally and longitudinally) may have a significantly lower RCR than the value reported.

5.15.13.5. Wet vs RCR. For operations on wet, ungrooved runways, use the RCR designated as "wet" in the aircraft flight manual for all takeoff and landing data. Use RCR 12 if the "wet" RCR is not designated in the flight manual. For operations on grooved runways, use the reported RCR.

5.15.13.6. No Reported RCR or RSC. When RCR or RSC reporting is not available, flight crews are to consider a runway surface as wet when there is sufficient water on the surface to cause reflective glare or when rain is falling.

5.15.13.7. Localized Hazards. RCR or RSC reports do not call attention to localized RSC hazards, i.e. standing water pools, snow, and sand drifts. Such hazards probably will not be reported unless accompanied by reduced RCR. Pilots should be alert to the possibility of this condition existing and, if deemed safe, attempt to avoid these hazards.

5.15.13.8. RCR Corrections. Do not use runways with reported RCR lower than the lowest RCR correction contained in the flight manual.

5.15.13.9. If the runway is wet and the reported RCR is higher than the MDS specific flight manual wet RCR, the actual reported RCR may be used for mission accomplishment.

5.16. Aircraft Taxi Obstruction Clearance Criteria and Foreign Object Damage (FOD)Avoidance.

5.16.1. Without wing walkers, avoid taxi obstructions by at least 25 feet. With wing walkers, avoid taxi obstructions by at least 10 feet. ***EXCEPTION***: Aircraft at home station may delete wing walker restriction if IAW AFI 11-218 all restrictions are complied with.

5.16.2. When taxi clearance is doubtful, use one or more wing walkers. If wing walkers are unavailable, deplane one or more crew members to maintain obstruction clearance and provide marshalling. Use AFI 11-218 signals. The aircraft commander should use marshallers, wing walkers, deplaned crew members, or a crew member positioned at a door or window to act as an observer while maneuvering on narrow taxiways. During night taxi operations, marshallers should have an illuminated wand in each hand. Observers should be in a position to observe wing walkers at all times (through door or windows) and communicate to the pilot.

5.16.3. When 89 AW taxi certified flight engineers, flight mechanics, or flight crew chiefs taxi the aircraft, another taxi certified crewmember will be in the other pilot’s seat (Comply with AFI 11-218).

5.16.4. FOD Avoidance. Make every effort to minimize the potential for engine FOD. Crews should:

5.16.4.1. Carefully review airfield layout during mission planning. Be familiar with taxi routes, turn requirements, and areas for potential FOD.

5.16.4.2. Confirm that taxi routes have been swept. If a taxi route has not been swept, consider taxiing via an alternate route.

5.16.4.3. Minimize power settings during all taxi operations.

5.16.4.4. Avoid (when possible) 180-degree turns.

5.16.4.5. Avoid (when possible) taxi operations which would position a wing engine over an unprepared or un-swept surface. If it becomes absolutely necessary to position a wing engine over an unprepared or un-swept surface, the engine should be left in idle (to the maximum extent possible) until the engine is back over an improved surface.

5.16.4.6. Consider increasing power on remaining engines.

5.16.4.7. If it becomes absolutely necessary to accomplish a 180-degree turn on a narrow runway, the turn should be accomplished at an intersection of a link taxiway or at a designated turn around pad.

5.17. Fuel Requirements. This paragraph implements standard minimum fuel requirements.

5.17.1. As a minimum, required ramp fuel will consist of all fuel required for engine start, taxi, warm-up, APU operation, takeoff, climb, cruise, en route reserves (if required), alternate/missed approach (if required), descent, approach, and landing.

5.17.2. Alternate Fuel. As a minimum, alternate fuel will include fuel for a flight from the intended destination to the alternate aerodrome at optimum altitude and long range cruise speed. When holding is required in lieu of an alternate at a remote or island destination, compute holding for 1 + 15. A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military) within 2 hours flying time. The forecast weather at the remote or island destination must meet the criteria listed in **Chapter 6** of this AFI.

5.17.3. Required Ramp Fuel for Extended Overwater Operations (EROPS Twin Engine) Aircraft). Block to block fuel must be greater than or equal to: fuel required to fly to the ETP, experience a simultaneous engine failure and loss of cabin pressure, and proceed from the ETP to a recovery field at 10,000 feet or 13,000 feet (if sufficient crew oxygen is available) using single engine cruise procedures. If extra fuel is required, it will be added as identified extra.

5.17.3.1. NOTE. If passengers are not onboard and the crew is equipped with supplemental oxygen, flight may be planned and flown using recovery from the ETP at Single Engine Service Ceiling, instead of 10,000 feet.

5.18. Equal Time Points (ETPs).

5.18.1. If the flying time to a suitable alternate airfield exceeds 60 minutes, computed at 10000 feet, single-engine cruise speed, in still air, from any point along the route of flight, computation of an (ETP) is required. Annotate it along the planned route of flight on the OPC/GNC.

5.18.2. Compute ETPs according to the following formula:

	FL100 ETP (nm) = $\frac{D \times GSR}{GSR + GSC}$, where:
D is the distance in nautical miles between destination field and recovery field (not necessarily the departure field).	
GSR is the average ground speed to continue to return to a recovery field at 10,000 feet. To compute groundspeed, apply forecast headwind/tailwind component at 10,000 feet to true airspeed.	
GSC is the average ground speed to continue to destination at 10,000 feet.	
Example: D = 1040nm, 10,000 feet winds forecast 60 kt headwind to continue, 80 kt tailwind to return, TAS at 10,000 feet, LRC, is 324 kts at std day, 86,000 lb gross wt (from 1-1 or OPS Manual Volume 3).	
ETP = $\frac{(1040)(404)}{(404 + 264)}$ = 629 nm from the recovery base.	

NOTE: The computation above will yield an ETP based on recovering or continuing at 10,000 feet. This is the most limiting case, and will ensure an accurate ETP in the event of an emergency such as a rapid decompression.

5.19. Fuel Jettison Procedures. Fuel jettison is limited to the minimum necessary for safe and effective flight operations. Except in the case of an emergency, prior to jettisoning fuel, crews will notify the appropriate ATC or flight service facility of intentions, altitude, and location. Inform the appropriate ATC or flight service facility when the operation is complete.

5.19.1. Jettison fuel only under the following circumstances:

5.19.1.1. Aircraft emergency. Immediate reduction of gross weight is critical to safe recovery of the aircraft.

5.19.1.2. Urgent operational requirements. Immediate reduction of gross weight is necessary to meet urgent operational mission tasking.

5.20. BASH Programs. BASH programs are centralized unit efforts that provide information cross-feed, hazard identification, and a consolidated course of action. As a minimum, units must implement the following procedures:

5.20.1. Ensure compliance with the following Bird Watch condition restrictions:

5.20.2. Bird Condition Low. No operating restrictions.

5.20.3. Bird Condition Moderate. Initial takeoffs and final landings allowed only when departure and arrival routes will avoid bird activity. Local IFR/VFR traffic pattern activity is prohibited.

5.20.4. Bird Condition Severe. All takeoffs and landings are prohibited. Waiver authority is local OG/CC or equivalent. Parent MAJCOM/DO waiver is required to operate at airfields not controlled by the MAF. Make every effort to not schedule takeoffs, landings, and low-levels from one hour before to one hour after sunrise and sunset during the phase II period. Also, significant bird hazards will be published in FLIP GP and the IFR Supplement along with the associated airfield operating hour restrictions and avoidance instructions.

5.20.5. When operating at airfields where no BASH program exists, aircraft commander's have the authority to delay takeoffs and arrivals due to bird condition. Coordinate actions through appropriate command and control authority.

5.20.6. Enroute The aricrew should consider bird migratory patterns during enroute portion of the mission to minimize the potential of an in-flight bird strike. The Bird Avoidance Model (BAM) on HQ AFSC/SEF www site (http://www-afsc.saia.af.mil/AFSC/Bash/home.htm) provides BASH information including regionalized CONUS bird migration, PFPS software overlay, and latest news. See AFPAM 91-212, *Bird Aircraft Strike Hazard (BASH) Management Techniques*, for additional information.

5.21. Functional Check Flights (FCF) and Acceptance Check Flights (ACF). FCFs and ACFs will be performed according to T.O. 1-1-300 and the applicable MAJCOM 21-XX instruction.

5.21.1. Terms and Abbreviations:

5.21.1.1. FCF. FCFs are performed after accomplishing inspections or maintenance to assure the aircraft is airworthy and capable of mission accomplishment.

5.21.1.2. ACF. ACFs specify guidelines for accepting new production aircraft and to determine compliance with contractual requirements.

5.21.2. FCF Restrictions:

5.21.2.1. Conditions requiring an FCF may include (but are not limited to) major retrofit modifications, removal or replacement of moveable flight control surfaces, major repairs that would affect the flying characteristics of the aircraft, adjustment, removal, or replacement of major components of the flight control system for which airworthiness cannot be verified by maintenance operational checks, or removal or replacement of an engine.

5.21.2.2. The OG/CC or PPO/CC are responsible for the wing FCF program. The OG/CC may waive a complete FCF and authorize an FCF to check only systems disturbed by maintenance, inspection or modification. Additional guidance should be published in the local chapter of these instructions.

5.21.2.3. Minimum Crew Complement: Pilot: At least one Instructor; Flight Engineer/ Mechanic: one Instructor; CSO and F/A: as required.

5.21.2.4. Check flights should be conducted within the designated check flight airspace of the base from which the flight was launched except when the flight must be conducted under specific conditions, not compatible with local conditions and area restrictions.

5.21.2.5. The decision to approve a combined FCF and ferry flight is the responsibility of the NAF/DO.

5.21.2.6. FCFs will be accomplished by the best qualified instructor/evaluator aircrews which will be designated FCF qualified to their assigned aircrew position by the OG/CC in a letter.

5.21.2.7. FCFs will normally be conducted in daylight, VMC conditions. However, the OG/CC or PPO/CC may authorize a flight under a combination of VFR, IFR, and "VFR on Top" conditions. The flight will begin in VFR conditions. If the aircraft and all systems are operating properly, it may proceed IFR to penetrate cloud cover to VFR on top to continue the altitude phase of the flight.

5.21.2.8. FCF aborts—If a malfunction occurs during an FCF and is not related to the condition generating the FCF, and the original condition operationally checks good, the aircraft may be released for flight.

5.21.2.9. OG/CC and deployed mission commander may authorized temporary waivers to these FCF procedures for aircrew qualification when operationally necessary. Permanent waiver requests require AMC/DOV approval.

5.22. Participation in Aerial Events. IAW AFI 11-209, all aerial events must be sanctioned and individually approved by the appropriate military authority, and dated with the FAA. AFI 11-209 clearly identifies events sanctioned for support, and specifies the approval authority for each type. AFI 11-209 also stipulates that units participating in aerial events will ensure activities are coordinated with the FAA through the regional Air Force representative.

5.23. Hand-Held GPS. Unless GPS is integrated into MDS aircraft flight management systems and certified for in-flight use, aircrews will carry a hand-held GPS on every off-station mission. A hand-held GPS may be carried on local training missions, if a navigator is on board. C-20 and C-9 aircrews will not carry hand-held GPS on local training missions. The hand-held GPS, when operating properly, can provide useful information; however, it must never be used as the primary navigation source. The actual use of the hand-held GPS rests with the aircraft commander. Its usage must never jeopardize safety. Unless equipment is specifically certified for use below 10,000 ft AGL per MIL-STD 461D and MIL-STD 462D, use of the hand-held GPS is restricted to operations above 10,000 ft AGL only. Above 10,000 ft AGL, any type of hand-held GPS may be used unless interference is noted with any aircraft system.

5.23.1. The Bendix KLX-100 hand-held GPS and the Rockwell E-PLGR attached to a certified laptop computer are approved for use below 10,000 ft AGL. These GPS units meet the MIL-STD-461D requirements for radiated and conducted emissions when tested in accordance with MIL-STD-462D test methods. The KLX-100 has a VHF radio transmit capability, but the COMM function is not certified per AFI 11-202 Volume 3. The COMM function must be disabled when the KLX-100 is operated in any AMC and AMC-gained aircraft. The VHF radio is disabled when in the GPS only mode. All AMC and AMC-gained units using the KLX-100 will use it in the GPS only mode from engine start to engine shutdown, unless needed in an emergency situation.

5.23.2. Before using the hand-held GPS in-flight, aircrew members must receive training and aircraft must be capable of supporting the hand-held GPS equipment. The hand-held GPS will not be used to update navigation equipment (INS) unless the hand-held GPS position can be confirmed by another aircraft source (i.e. radar, TACAN, VOR, another INS, or navigator).

5.23.2.1. WARNING. Electrical problems have been reported on KLX-100 units. It is extremely important to insert all of the batteries in the proper orientation as shown in section 1.1.2, Figures 1-11 through 1-17 of the operators guide. The manufacturer confirms that if only one battery is inserted incorrectly, the unit will operate for 10-30 minutes. An increase in temperature may be noted followed by a crackling sound as the battery expands and ruptures. Be extremely careful as battery acid may leak from the bottom of the unit. A way to double-check proper insertion is to go to the GPS Setup page and check the bar graph showing battery power. Make sure it reflects battery strength near 100%. If a problem is detected shut down the GPS immediately and disconnect unit from any external power source. Report the incident through proper channels. Do not attempt to remove the batteries. This action could cause injury to the individual and will impair investigation for warranty claims.

5.24. Use of Automation. In order to perform the same demanding worldwide strategic and theater missions currently flown with larger crews, automation is employed. All technical orders, procedures, checklists, training, and supporting documents are designed to support the human operator.

5.24.1. It is the responsibility of the crew to fully understand the operations and limitations of the automation on the aircraft. In flight, the pilot flying (PF) will determine the most desirable level of automation for a given situation. The aircraft commander has the ultimate responsibility and authority for the safety of the aircraft, passengers, and crew. The aircraft commander must manage the workload, set priorities and employ the available resources, including automation, to maintain overall situational awareness.

5.24.2. Use appropriate levels of automation as required by the flight conditions. The first priority is to fly the aircraft. The Flight Management System (FMS)/Automatic Flight Director System (AFDS)

and Mission Computer (MC) are intended to aid in workload management, not complicate it. As the flight situation changes, do not feel locked into a level of automation.

5.24.3. Avoid the following common pitfalls associated with over-reliance, misuse, or misunderstanding of automation.

5.24.3.1. Fixating on the automation. One pilot should always remain heads up. Establish clear roles for computer related tasks. Announce "pilot heads down" or "copilot heads down" when the task requires focusing significant attention on the mission computer in flight.

5.24.3.2. Misprioritizing programming tasks. Extensive reprogramming during critical phases of flight or during periods of high workload should be avoided.

5.24.3.3. Mode awareness . The pilot flying (PF) should make AFDS panel changes during coupled operations. During uncoupled flight, the PF should direct the pilot not flying (PNF) to make changes to the AFDS panel. Confirm all mode changes by observing the correct flight mode annunciator (FMA) indications.

5.24.3.4. Assuming automation is programmed correctly . Pilots should back up each other when making AFDS panel settings or programming the MC.

5.24.3.5. Over-reliance on automation . Practice flight operations at all levels of automation to be proficient. If the automation is not performing as expected, take over manually.

5.25. Aircraft Recovery From Unprepared Surfaces. Aircrews will normally not attempt to recover an aircraft after inadvertent entry onto unprepared surfaces not suitable for taxi. Using the appropriate equipment, ground crews will accomplish aircraft recovery. Unless an emergency situation dictates otherwise, aircrews may accomplish recovery only if there is no aircraft damage, the surface will support the aircraft, and the AC has coordinated with appropriate AMC headquarters maintenance authorities through the 89 OG/OGO.

5.26. Traffic Alert and Collision Avoidance System (TCAS). TCAS is designed to enhance crew awareness of nearby traffic and issue advisories for timely visual acquisition or appropriate vertical flight path maneuvers to avoid potential collisions. It is intended as a backup to visual collision avoidance, application of right-of-way rules and ATC separation.

5.26.1. It is imperative to follow resolution advisories (RA) to obtain aircraft separation computed by TCAS. Failure to follow the computed RA may increase the probability of a midair collision. If able, visually clear the airspace before maneuvering the aircraft in response to a TCAS advisory.

5.26.2. Advise ATC as soon as practical when a deviation becomes necessary due to a TCAS resolution advisory.

5.27. Pilot Incapacitation. Pilot incapacitation occurs more frequently than any other routinely trained emergency. It has occurred in all age groups and during all phases of flight. Incapacitation occurs in many forms ranging from sudden death to subtle, partial loss of mental or physical performance. Subtle incapacitation's are the most dangerous and they occur the most frequently. Incapacitation effects can range from loss of function to unconsciousness or death. The key to early recognition of pilot incapacitation is the regular use of the "crew concept" of flight deck operations. Proper crew coordination involves checks and cross-checks using verbal communications. Routine adherence to standard operating procedures and standard profiles can aid in detecting a problem.

Chapter 6

AIRCREW PROCEDURES

Section 6A—Pre-mission

6.1. Aircrew Uniform.

6.1.1. Wear the aircrew uniform, as outlined in AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, on all missions, unless otherwise authorized. When the Foreign Clearance Guide requires civilian attire, wear conservatively styled civilian clothing.

6.1.2. 89 AW Aircrew Uniforms. The 89 AW flight crews wear the aircrew uniform directed in paragraphs **6.1.2.** through **6.1.5.**

6.1.2.1. The aircrew uniform is the service dress uniform as described in AFI 36-2903. The shirt will be the light blue short or long sleeved shirt with necktie/tab. Ribbons will not be worn on the shirt. The blue pullover sweater is not authorized.

6.1.2.2. Crewmembers greeting passengers at the bottom of the steps (ASNCO, FE, FM) will wear the blue service hat. Aircraft commanders will determine the appropriate headgear for the remaining crewmembers.

6.1.2.3. Blue Aircrew Flight Jackets (SAM jacket). 89 AW personnel are authorized wear of a distinctive jacket, embroidered with the "Special Air Missions" logo. The light weight blue jacket may be worn with either enlisted stripes or metal shoulder insignia. Officer rank will be displayed on the shoulder. The SAM jacket will not be worn with civilian clothes off the aircraft. The SAM jacket is not normally appropriate for greeting DVs at the aircraft.

6.1.2.3.1. PPO personnel are authorized wear of a distinctive jacket embroidered with the first and last name in script on the left side and the Presidential seal (patch) on the right side of the Air Force lightweight blue jacket. Metal rank insignia will be worn on the shoulder for both officer and enlisted. The jacket will not be worn with civilian clothes off the aircraft.

6.1.2.4. All flight attendants (F/A) wear the flight attendant uniform in lieu of the service uniform. The SAM jacket will not be worn as an outer garment with the F/A uniform except when working in the squadron area and when working on or around the aircraft prior to stations time and for post flight duties. When the jacket is worn with the F/A uniform, rank insignia must be removed.

6.1.2.5. Wear of the service coat/blazer is desired when practical, but common sense will dictate when aircraft commanders may authorize exceptions. Wear the overcoat, raincoat or all-weather coat as an outer garment when appropriate. The aircraft commander may authorize shirt/tie or blouse without the coat/blazer when appropriate; however, all crewmembers will be similarly attired at all times. C-20/C-37, and C-9 crewmembers (except FM) will not normally carry the service coat due to closet space limitations.

6.1.2.6. When civilian clothing is required, men wear a conservative suit or sport coat and tie. Women wear a conservative suit or blazer and slacks/skirt combination. Crewmembers should present a businesslike appearance, as opposed to a 'nicely dressed casual' appearance. F/A wear the prescribed flight attendant uniform.

6.1.2.7. All crewmembers wear the prescribed dress at all times when on duty, including travel to and from crew rest quarters. ***EXCEPTION***. Aircraft commanders may permit crewmembers to remove their ties during preflight/postflight activities in the immediate vicinity of the aircraft. In cold weather, flight mechanics, flight engineers, and crew chiefs may wear the sage green flight jacket/parka and/or Nomex coveralls for preflight/postflight maintenance activities at the aircraft. All crewmembers will be dressed in the appropriate attire at stations time.

6.1.2.8. The service coat/blazer or civilian coat need not be worn on the flight deck. The aircraft commander will designate aircrew attire (service coat/blazer/SAM jacket/shirt and tie) in the crew compartment on the C-9, C-32, and C-137 when DVs transit the crew compartment during enplaning or deplaning. Crewmembers who must enter the passenger compartments in-flight will be in proper uniform.

6.1.3. Civilian Clothing on Airlift Missions. The 89 AW aircrews fly in the designated military uniform whenever possible; however, circumstances may require exceptions. Aircraft commanders determine when civilian clothing is worn in lieu of the aircrew uniform according to these guidelines:

6.1.3.1. Wear civilian clothing when the USAF Foreign Clearance Guide (FCG) indicates that wear of the uniform is prohibited or not recommended. C-20/C-37 alert launches to destinations outside the United States will wear civilian clothing.

6.1.3.2. Wear civilian clothing when intelligence briefings give a clear indication that wearing the uniform would not be prudent (CONUS or OCONUS).

6.1.3.3. Wear civilian clothing when specifically requested by the DV or at any other time at the discretion of the aircraft commander.

6.1.3.4. Crewmembers should not be required to change clothing at the aircraft under normal circumstances. If the FCG allows you to arrive at an airport in uniform, but requires civilian clothing when leaving the airport, wear civilian clothing for that mission.

6.1.4. Locals, FCFs, and Ferry Flights. Uniforms for local flights are specified by the squadron. Crewmembers on FCF/ferry/training flights away from home station may wear any authorized blue service uniform combination. Crew chiefs and maintenance personnel are authorized to wear the utility uniform.

6.1.4.1. All crew members will have nomex gloves in their possession when flying in a flight suit.

6.1.4.2. It is recommended that primary crew members wear Nomex gloves during engine start, taxi, takeoff, and landing when flying in a flight suit.

6.1.5. TDY 89 AW flight crews will comply with AFI 36-2903 standards at all times, including while off duty. Clothing will present a neat, conservative appearance and be appropriate for the country and/or hotel/facilities being visited. At no time will crewmembers wear clothing with profane or obscene statements, pictures, or logos. Male crewmembers are not authorized the wear of earrings.

6.1.6. Uniforms for aircraft security NCOs (ASNCOs). 89 SPS ASNCOs will wear the same type clothing, military or civilian, as the rest of the aircrew. For stateside and overseas missions scheduled to RON at civilian airports or overseas missions transiting US military bases where civilian clothing is required for travel, civilian clothing will be worn while performing sentry duties. The ASNCOIC will coordinate duty uniform requirements with the aircraft commander prior to mission departure.

6.1.7. Personnel will have the appropriate items of clothing in their possession when flying in Arctic and Antarctic regions. ***EXCEPTION***. Not applicable to transoceanic flights or when staging or transiting Elmendorf AFB.

6.2. Personal Requirements.

6.2.1. Passports. Carry a valid passport on all missions scheduled to depart the CONUS. **EXCEPTION**. Unit commanders may authorize personnel who have applied for or submitted passports for renewal to act as crew members on missions not scheduled to transit locations where passports are required. Aircraft commanders are responsible for ensuring passports (with applicable visas) are included in the mission kit and taken on the mission.

6.2.2. Shot Record. Ensure immunization requirements are met. Carry shot records on all missions outside the 48 conterminous states. 89 AW crew members must maintain worldwide immunization requirements.

6.2.3. Corrective Lenses. Comply with AFI 11-202, Volume 3.

6.2.4. Driver's License. A valid state driver's license is required on each TDY where use of US government general purpose vehicles may be required. Contact the local airfield manager if the vehicle will be flight line operated.

6.2.5. Identification (ID) Tags. Each crewmember will carry or wear two ID tags.

6.2.6. Rings and Jewelry. Crew members will remove all finger rings and loose fitting jewelry prior to performing aircrew duties.

6.2.7. Flashlight. Each crewmember must carry an operable flashlight at night.

6.2.8. Headgear. Do not wear headgear that interferes with donning the oxygen mask or smoke goggles while performing crew duties.

6.3. Pre-mission Actions.

6.3.1. Mission Planning and Airfield Review. The AC is responsible for all mission planning, foreign clearance requirements, and coordination of all support requirements. The following are suggested review areas:

6.3.1.1. Airspace/Airfield Review. Flip, fir/uir/adiz procedures. Runways, Taxiways, Ramp Areas. Refer to paragraph **5.15.** for minimum runway and taxiway requirements. Check weight bearing capacities. Contact the Airfield Manager directly if airport capabilities are questionable. Parking/Hangar Facilities. Check adequacy of parking space and if adverse weather is possible arrange for hangar space if available. Verify the availability of aircraft stairs if required prior to mission departure. Refueling/Servicing Capabilities. Check for DOD contract fueling availability prior to making any arrangements with airport facilities. If cold weather operations are expected, check snow removal and de-icing capabilities prior to mission departure.

6.3.1.2. Airspace classifications, ASRR, and airport qualification videos (if available).

6.3.1.3. Theater Instrument Procedures. Required instruments and/or procedures for Non-DoD Approaches, course reversal approaches, circling, holding, NDB approaches, Host Nation/Jeppesen Approaches, and Altimeter setting procedures.

6.3.1.4. Organized Track Systems. Minimum Navigation Performance Specifications (MNPS) Airspace requirements; North Atlantic and Pacific Region Track Systems.

6.3.1.5. Communication and Emergency Procedures. Command and Control, Over-water position reporting, lost communications procedures, emergency procedures, and weather information sources.

6.3.1.6. Border Clearance. Foreign Clearance Guide, Customs, Immigration, Agriculture, Insect and Pest Control, and Diplomatic Clearances.

6.3.1.7. Flight planning. **DD Form 1801, DoD International Flight Plan**, Jeppesen Approach Plates and Charts, Theater Weather Conditions, Fuel Reserves and Alternate Requirements, Equal Time Points/Critical Wind Factors, and International NOTAMs.

6.3.1.8. Special Military Operations. Altitude Reservations, AOR procedures, and Due Regard.

6.3.1.9. Other Regulatory Requirements. General navigation procedures, Life Support equipment, hazardous cargo, crew rest/crew duty time, aircraft records/**AFTO 781, AFORMS Aircrew/Mission Data Document**, procedures, mission essential ground personnel/additional crew members, passenger handling, etc.

6.3.1.10. Location Information. Command and control/reporting procedures, maintenance problems, aircraft security, social customs and taboos, billeting, transportation, etc.

6.3.2. Pre-Mission Planning. Pre-mission planning responsibilities include, but are not limited to the following:

6.3.2.1. Review tasking and itinerary. When mission confirms, contact the users mission contact. Inform the contact officer that excessive carry on baggage cannot be stowed in the passenger compartment.

6.3.2.2. Review applicable OPORD and FLIP.

6.3.2.3. Foreign Clearance. Review the USAF Foreign Clearance Guide (FCG), including the classified supplement. Ensure the planned itinerary can be flown in compliance with the provisions of the FCG. If not, obtain an exception to the FCG through proper diplomatic channels or plan and coordinate an itinerary change. Note where visas are required, and ensure the passport control NCO and the aircrew schedulers are aware of visa requirements. Start visa processing as soon as possible.

6.3.2.4. Flight Itinerary. Calculate itinerary times and prepare a flight itinerary. Itinerary leg times are block-to-block times (door closed to door open) and include time for taxi-out, takeoff, climb, descent, approach, landing, and taxi-in. For planning purposes, use true airspeeds. Obtain forecast wind factors or use climatology tables to compute an estimated ground speed. Apply this to the route distance (including mileage for known off course maneuvering for SIDs/STARs). Add the block time factor. This factor is adequate to account for normal vectoring delays and nominal taxi distances. Adjust this block time factor as necessary if a procedure turn will be required or if there will be excessive taxi times (such as Hickam AFB HI). Round the total up or down to the nearest five minutes. Calculate itinerary times and prepare a flight itinerary according to **Table 6.1.**.

Table 6.1. Flight Itinerary.

Aircraft Type	TAS up to 200 NM	TAS 200 to 400 NM	TAS over 400 NM	Block Time Factor
C-9	375 kts	420 kts	450 kts	+ 20 mins
C-20	375 kts	420 kts	450 kts	+ 20 mins
VC-25A	420 kts	460 kts	490 kts	+ 25 mins
C-32	375 kts	420 kts	460 kts	+ 25 mins
C-137C	375 kts	420 kts	460 kts	+ 25 mins
C-37	375 kts	420 kts	450 kts	+ 20 mins

6.3.2.5. Messages. Advance notice and/or diplomatic clearance messages are required for all missions to destinations outside the CONUS, including flights to Alaska, Hawaii, and Puerto Rico. Exact requirements and addressees for each country are found in the USAF FCG.

6.3.2.5.1. 89 OG/OGOF will assist with message preparation and type messages from your handwritten drafts. Normally, messages will not be released until the crew has made contact with the mission contact officer to confirm itinerary details and the mission is confirmed. The aircraft commander or other designated crew member will proofread typed messages before 89 OG/OGOF releases them. Initial the appropriate copy after proofreading.

6.3.2.5.2. All messages pertaining to 89 AW missions must be released by 89 OG/OGOF or 89 AW/CP with coordination by 89 OG/OGO. 89 OG/OGOF personnel are on call during non-duty hours to provide assistance. For alert missions and other short notice or non-duty hour requirements, expedite your diplomatic clearance requests and advance notice messages by using immediate or night action (NIACT) immediate precedence. Initial contact by telephone is acceptable but should be followed by a message. The aircraft commander is responsible for obtaining the required clearances. 89 OG/OGOF and the SAM Command Post duty officers assist as requested, but the aircraft commander/navigator must ensure the required clearances are obtained.

6.3.2.6. Protection of DV foreign travel itineraries is required by DOD and USAF policy guidance. The following procedures apply:

6.3.2.6.1. For unclassified missions operating outside the United States, US possessions, or Canada, do not include the name of the DV in unclassified messages. Diplomatic clearance and advance notice messages should be sent unclassified/encrypt for transmission only/for official use only (UNCLAS/EFTO/FOUO). If a station does not have EFTO capability, send them a separate message with the information they need. Send a separate message, classified at least confidential, to all addressees to identify the DV party. This message should contain downgrade instructions to allow downgrade to unclassified after the mission returns to home station. Whenever possible, include a statement that classified information may be released to foreign governments on a close hold basis when required to obtain diplomatic clearances. All other internal mission paperwork will be unclassified; however, any follow-up message traffic must not identify the DV party in connection with the mission number, aircraft number, or the published itinerary.

6.3.2.6.2. Messages pertaining to DV travel solely within the United States, US possessions, and Canada may include the DV party identification and will be sent UNCLAS, EFTO, or FOUO.

6.3.2.6.3. If the mission itinerary is classified, all message traffic must be classified at the appropriate level. Confer with the mission contact officer to determine the appropriate classification. Try to keep the classification level to confidential whenever possible. All internal mission paperwork must also be classified.

6.3.2.6.4. Whenever possible, comply with the lead time requirements of the USAF FCG. If this is not possible, comply with the short notice procedures in the FCG General Information Booklet.

6.3.2.6.5. Do not include request for crew support (hotel reservations, transportation, etc.) in advance notice/diplomatic clearance request messages. Send a separate message to the appropriate action addressees only. If you have personally arranged any aircraft/crew support, indicate these arrangements in your messages so the local support agencies will not duplicate your efforts.

6.3.2.7. En Route Support. Aircraft commanders are responsible for arranging all en route support. For most foreign missions, arrange support by tasking the local Defense/Air Attaché by message. For all CONUS missions (and as necessary for foreign missions), aircraft commanders will personally contact each destination to arrange support. When a mission or portion of a mission is canceled or changed, the aircraft commander is responsible for advising affected support agencies or attaches.

6.3.2.8. Coordinate for worldwide FLIPs and sufficient communications security (COMSEC) materials for the duration of the mission.

6.3.2.9. Review anti-hijacking procedures (AFI 13-207, *Preventing and Resisting Piracy [Hijacking]*, and **Chapter 7** of this AFI).

6.3.2.10. Obtain terrain charts for unfamiliar destinations, if available.

6.3.2.11. If applicable, release available seats to passenger terminal.

6.3.3. Parking, Servicing, and Aircrew Requirements. The following should be considered when planning missions into certain locations:

6.3.3.1. Guard and Reserve Facilities. On missions to CONUS civil airports with a military facility (ANG/AFRC) capable of providing support, 89 AW policy requires the use of the military facility; however, there are exceptions. If the mission will arrive or depart outside the normal operating hours of the military facility (nights, weekends, or holidays) use a civilian facility (terminal, FBO ramp, etc.) provided you can arrange the necessary support. If the using agency requests use of a civilian facility in preference to an available military facility, use the civilian facility. If your DV party has a requirement to use the military facility, make arrangements to use the military facility. In general, avoid requiring ANG/AFRC units to work overtime in support of SAM missions unless the using agency has a specific need to use the military facility or suitable support cannot be obtained from civilian sources.

6.3.3.2. Contract Servicing Agents. When you plan to use civilian facilities for parking or servicing, refer to the Avfuel and Avoil Into Plane Contract Listing available in each mission kit and at

the Squadron Operations Center. Use the government contractor unless you cannot obtain the required services. If your mission requires parking away from the contractors ramp, try to obtain refueling from the designated contractor; however, don't taxi to the contractors ramp solely for refueling. Use a credit card or **AF Form 315, USAF AVfuel Invoice**, if you must purchase fuel from other than the designated contract vendor.

6.3.3.3. Border Clearance. Missions entering or departing the United States will normally use a regular or special foreign clearance base (FCB), a civil international airport of entry (AOE), or a landing rights aerodrome as specified in the FCG. Military inspectors at special FCBs are only authorized to clear aircraft participating in the special projects listed for each base in the FCG. When aircraft not participating in the approved special projects require clearance, the special FCB base commander must obtain advance approval from US border clearance officials in order to clear the aircraft. Aircraft must not transit a special FCB for clearance unless advance approval is confirmed. If the mission requires, arrangements can be made to use any suitable CONUS airfield, but the AC must coordinate border clearance inspections with all appropriate government agencies in advance. Refer to the USAF FCG and applicable AF Instructions.

6.3.3.4. Security Support. Standard message formats include security support. If ASNCOs are assigned to the mission, the senior ASNCO can assist in arranging support. However, security support arrangements are the aircraft commanders responsibility.

6.3.3.5. Aircrew Billeting. The 89 AW policy requires maximum use of government facilities on missions. Crew integrity is a mission requirement. Aircraft commanders must know where their crewmembers are at all times. Itinerary changes are common and often require immediate action by crewmembers. To provide crew control, all crewmembers should be billeted at the same facility at en route stops. Aircraft commanders must have a "class A" or equivalent phone in the room. The mission contact officer/escort and the Andrews Command Post controller must know the location of the crew and how to contact them. Crew integrity does not require the whole crew to be billeted together in a BOQ. "Billeted at the same facility" means billeted on the same base or at the same hotel complex; however, if the whole crew is not together, the enlisted aircrew coordinator (EAC) must have a room phone. When government quarters are available, but not suitable, use an **AF Form 2282, Statement of Adverse Effect - Use of Government Facilities**, to justify the non-use. AMC requires the use of suitable government quarters when they are available, regardless of the scheduled ground time. Aircraft commanders use these criteria when evaluating the suitability of available government quarters:

6.3.3.5.1. Can the crew respond to the needs of the DV party if they must fly immediately?

6.3.3.5.2. Can the crew receive adequate uninterrupted crew rest?

6.3.3.6. Cabin Service. Determine if meal/beverage service is desired. Arrange for the mission flight attendant (F/A) to call the contact officer directly to coordinate menus and other cabin service requirements.

6.3.3.6.1. Aircraft commanders normally should not discuss meal requirements with the contact officer. If the mission flight attendant is not available, the aircraft commander should ask the F/A scheduler to make contact and pass on the requirements to the mission F/A.

6.3.3.6.2. Confirm payment arrangements for meals and beverage service. If charges will be billed, obtain the complete billing address. If a mission cancels at the request of the using

agency after the F/A has purchased supplies, the aircraft commander will advise the contact officer to the costs of all non-returnable items.

6.3.3.7. Advance Per Diem. Normally, advance per diem will not be paid to crewmembers, they are expected to use their government provided credit cards. When the mission requires an advance that is too large to reasonably collect from an automatic teller, the Squadrons Operations Administration Section will assist in arranging advance per diem payments. On missions where substantial cash payments are anticipated for aircrew transportation and other incidental official crew expenses, the aircraft commander will designate a transportation officer to receive an additional advance and be responsible for these payments. Refer to the Joint Travel Regulation for information about per diem rates and procedures to follow when applying for special per diem allowances.

6.3.4. Other planning factors:

6.3.4.1. The squadron operations center serves as point of contact between 89 OG/OGO and crewmembers. Whenever crew members need to coordinate with 89 OG/OGO during mission planning and itinerary coordination, go through the squadron operations center.

6.3.4.2. All 89 AW missions are considered "FOR OFFICIAL USE ONLY" and crew members will not discuss the mission or any DV information with anyone not having a need to know. Unclassified missions may be designated "CLOSE HOLD". In this case, certain mission details are restricted from normal release. Clarify the applicable restrictions with 89 OG/OGO prior to any mission planning or coordination activities.

6.3.4.3. Confirm the aircraft tail number with the contact officer. Obtain the contact officers home telephone number and provide him/her with the aircraft commanders home number. Notify 89 OG/OGO if the contacts name or phone number is different from the one listed on the Andromeda printout.

6.3.4.4. Prearrange your predeparture weather briefing with Andrews AFB forecaster. Provide all details needed to prepare your weather briefing. Do not request "social weather forecast" for "CLOSE HOLD" missions.

6.3.4.5. Prearrange special communications support as follows:

6.3.4.5.1. Mystic Star HF support is required for all missions transporting the Secretary of Defense. Mystic Star support is also available on a priority basis for aircraft transporting the Vice President, cabinet members, service secretaries, and service chiefs of staff. When Mystic Star support is required, the communications system operator (CSO) or flight mechanic will prepare the Mystic Star activation message to be typed and dispatched by 89 OG/OGOF. Last minute requests at crew show time are not acceptable. For alert missions, the aircraft commander will request the squadron duty officer or the 89 AW Command Post controller to arrange coverage. When Mystic Star support is required for C-9, C-37 and C-20 missions annotate “Mystic Star” in the requirements, the duty officer/NCO will ensure that the aircraft commander has pre-arranged support.

6.3.4.5.2. FM radio support is provided by the White House Communications Agency (WHCA) in accordance with established priorities.

6.3.4.5.3. Current procedures for use of the Mystic Star HF network and the WHCA FM networks are described in the 89 OG/CC Special Communications Support Procedures Package available in each mission kit and at the squadron operations center.

6.3.4.5.4. Denial of service from Andrews airways. When denied service from Andrews Airways due to higher priority traffic and the aircraft is working another airways station, tell 89 AW Command Post which station you are working.

6.3.4.5.5. Denial of service from WHCA. When denied service from WHCA on White House missions with a Secure Communications Required profile, notify squadron operations center (SOC) and advise them to contact 89 OG/OGO immediately.

6.3.4.6. Arrange for spare parts as required. C-137 aircraft commanders or a designated crewmember will coordinate mission support kit requirements with the aircraft crew chief. C-9, C-20, C-37, and C-32 aircraft commanders on extended overseas missions to areas where support facilities are limited may request certain spares be issued for a particular trip. Coordinate requirements with 89 OG/OGO through the SOC.

6.3.5. Air Force Two and First Lady Mission Planning. The need for current airfield information for Air Force Two and First Lady Missions is critical. When the mission is tentative 89 OG/OGOF (mission planning) will provide ramp phone numbers for all locations. These phone numbers should be the planned FBO office, the airport manager, command post, or base operations. When the mission confirms, the assigned aircrew will confirm the ramp contact phone numbers, the commercial phone requirements, and the exact parking locations at all scheduled airports. Pass the information via fax or telephone through the squadron to 89 OG/OGO. This information will then be updated in the SAMMS general mission screen remarks section. This requirement must be completed at the earliest possible date. Agencies outside the wing use this information to plan and monitor missions.

6.3.6. Itinerary Coordination. Use the following procedures when confirming and planning itinerary details:

6.3.6.1. Preposition for DV pickups. Plan to preposition for DV pickups two hours prior to the scheduled departure time. Aircraft commanders may request preposition on the night prior to an early morning pickup depending on aircraft and crew availability. Early preposition may also be requested to allow adequate crew rest prior to an extended crew duty day. Coordinate request for early preposition with 89 OG/OGO.

6.3.6.2. Configurations. Aircraft configuration requirements originate with HQ USAF/CVAM through 89 OG/OGO. If the using agency requests a change in the configuration shown on the 89 AW mission printout, the contact officer must coordinate the request with the HQ USAF/CVAM duty officer. Aircraft commanders cannot accept aircraft configuration changes directly from the using agency. Advise the contact officer to contact HQ USAF/CVAM, and notify 89 OG/OGO of the pending request. Configuration changes desired by the aircrew must be coordinated through 89 OG/OGO.

6.3.6.3. Manifest Information. The aircraft commander will ensure the passenger service agent (SAMPAX) receives a passenger list in sufficient time to prepare accurate manifests. Every effort will be made to provide this list at least one duty day prior to mission departure. The aircraft commander, through the mission contact, will provide the passenger list or arrange for the contact officer to provide the list to SAMPAX. Manifests will be reviewed and corrected for accuracy prior to mission departure and after all passengers have boarded the aircraft.

6.4. Aircrew Publications Requirements. As a minimum, aircraft commanders will carry (hard copy or disk) current MDS aircraft applicable flight manuals, performance manuals, abbreviated checklists, AFI 11-202, Volume 3 and this volume on all missions. All other crew positions must carry the appropriate abbreviated checklists. Squadron operations officers may modify this requirement provided local procedures are defined that as a minimum assure at least one crewmember other than the AC is tasked to carry the applicable current publications or the applicable current publications are maintained on board the aircraft.

6.4.1. Cockpit Congestion. Cockpit congestion is a problem on all 89 AW aircraft. Those crewmembers not required to carry publications on a mission should leave them behind. Only the AC is required to carry publications for pilots. Only one navigator, FE, CSO, and F/A is required to carry publications. Carry only the publications needed. See guidance in **Chapter 10** for local procedures.

Section 6B—Pre-departure

6.5. Airfield Certification. All crew members and staff mission planners will review airport qualification audiovisual slide tape programs as available before operating missions into unfamiliar airfields. In addition, aircrews will review the Airfield Suitability and Restrictions Report (ASRR) and should contact HQ AMC/DOVS for updates to airfield operability and weight bearing capability. The 89 OG/CC or PPO/CC may waive the airfield certification requirement except for landing on runway 10 at Guantanamo Bay, Cuba.

6.6. Aircrew Intelligence Briefing. Prior to leaving home station on missions departing the CONUS, crews will receive an intelligence briefing that will emphasize terrorist, enemy, and friendly political and military development in the area in which they will be flying. Once in theater, aircrews should receive intelligence updates on initial arrival at a forward operating location (FOL) or en route stop and thereafter when significant developments occur. Report information of possible intelligence value to the local intelligence officers at the completion of each mission.

6.7. Flight Crew Information File (FCIF) Procedures.

6.7.1. Review FCIF, volume 1, part A, before all missions or ground aircrew duties, and update the FCIF currency record with the latest FCIF item number, date, and crew member's initials.

6.7.2. Crew members delinquent in FCIF review or joining a mission en route will receive an FCIF update from a primary aircrew member counterpart on the mission. Instructor pilots who fly with general officers are responsible for briefing appropriate FCIF items.

6.7.3. Crew members not assigned or attached to the unit operating a mission will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of the flight authorization.

6.7.4. Aircraft commanders will ask 89 AW/CP for any pertinent FCIF changes released after departing home station.

6.8. Flight Crew Bulletins (FCB).

6.8.1. FCBs are issued under provisions of AFI 11-408, *Aircrew Standardization/Evaluation Program—Organization and Administration (AFI 11-202 Volume 2 when published)* and MAJCOM sup-

plements. Operations group Stan/Eval will be the OPR for FCBs. Items in FCBs may include local procedures and policies concerning equipment and personnel generally not found in any other publications.

6.8.2. All crew members should be cognizant of FCB contents.

6.9. Airfield Security. When departing on missions destined outside the CONUS, aircraft commanders should review applicable MAJCOM security publications.

6.10. Mission Kits. Carry mission kits on all operational missions. Mission kits will contain all forms and publications necessary for safe and efficient conduct of the mission. Squadron commanders will determine and publish the contents of the mission kit by specific MDS aircraft type. Suggested items include:

6.10.1. Publications.

6.10.1.1. AFI 11-401, *Flight Management.*

6.10.1.2. AMCI 11-208, *Tanker/Airlift Operations.*

6.10.1.3. AFI 23-202, *Buying Petroleum Products and Other Supplies and Services Off-Station.*

6.10.1.4. AFJI 11-204, *Operating Procedures for Aircraft Carrying Hazardous Materials.*

6.10.1.5. Airfield Suitability and Restrictions Report (ASRR).

6.10.1.6. AMC Aircrew Border Clearance Guide.

6.10.1.7. FCB.

6.10.2. Forms.

6.10.2.1. DD Form 1351-2, Travel Voucher or Sub-voucher.

6.10.2.2. DD Form 1351-2c, **Travel Voucher or Sub-voucher (Continuation Sheet).**

6.10.2.3. DD Form 1854, **US Customs Accompanied Baggage Declaration**.

6.10.2.4. DD Form 2131, **Passenger Manifest**.

6.10.2.5. Customs Form (CF) 7507, **General Declaration Outward/Inward**.

6.10.2.6. AF Form 15, **United States Air Force Invoice**.

6.10.2.7. AF Form 315, **United States Air Force AvFuels Invoice**.

6.10.2.8. AF Form 457, **USAF Hazard Report**.

6.10.2.9. AF Form 651, **Hazardous Air Traffic Report (HATR).**

6.10.2.10. AF Form 1297, **Temporary Issue Receipt**.

6.10.2.11. AF Form 3211, **Customer Comments**.

6.10.2.12. AMC Form 38, **Air Mail Crew Resource Management Anonymous Reporting System.**

6.10.2.13. AMC Form 43, **AMC Transient Aircrew Comments**

6.10.2.14. AMC Form 54, **Aircraft Commander's Report on Services/Facilities**

6.10.2.15. AF Form 4091, **Mission Data**.

6.10.2.16. AMC Form 97, **USAF Aircraft Mishap Report Worksheet**.

6.10.2.17. AF Form 4031, **Cockpit/Crew Resource Management Skills Criteria**.

6.10.2.18. AF Form 4075, **Aircraft Load Data Worksheet**.

6.10.2.19. H.M.S. Customs Declaration.

6.10.2.20. Japanese Customs Declaration.

6.10.3. Orders.

6.10.3.1. DD Form 1610, **Request and Authorization for TDY Travel of DoD Personnel**.

6.10.3.2. AF Form 1631, **NATO Travel Orders** (when required).

6.10.3.3. AMC Form 41, **Flight Authorization**.

6.10.4. Miscellaneous.

6.10.4.1. Box car seals.

6.10.4.2. Masking Tape.

6.10.4.3. NOTE. The Presidential Pilot determines the contents for PPO mission kits.

6.11. Route Navigation Kits. The AC and navigator, if applicable, are jointly responsible for the contents of route navigation kits. Kit contents are determined by the mission itinerary. Include all publications, charts, and forms required to fly the mission and comply with all FLIP and FCG requirements. Route navigation publications, charts, and forms for areas of routine operations may be kept on the aircraft. ACs will verify the currency of route navigation publications prior to departure from home station.

6.11.1. Aircraft Route Navigation Kits. The route navigation kits maintained on each aircraft include sufficient charts, approach booklets, SIDs/STARs and supplements for any CONUS mission. When a mission is planned to depart the CONUS, the aircraft commander or navigator will check out a supplementary kit from 89 OG/OGOF. Include a copy of the USAF FCG and the FLIP Planning Document. Sign out kits on the unit developed form (89 AW Form 9, **89 AW Foreign Briefing**). Return supplementary kits to OSOF immediately upon return to home station. NOTE: Navigation sight reduction tables (**HO 249, Volumes I, II, and III**) and the Air Almanac will be maintained on all C-137 aircraft at all times.

6.12. Briefing Requirements.

6.12.1. Pre-mission Briefings. Before departing home station, the AC will schedule and conduct a pre-mission briefing. The AC will brief crewmembers on all aspects of the mission using 89 OG/OGV developed and approved briefing guides, omit items that do not apply. As a minimum, at least one person from each crew position will attend the pre-mission briefing.

6.12.1.1. The necessity of pre-mission briefings for short notice, standby/alert, or one day missions will be at the ACs discretion. In this case, ensure all required information has been passed to the appropriate crewmembers.

6.12.1.2. Use the following checklist as a guide for pre-mission briefings:

6.12.1.2.1. Mission Requirements. Mission number, aircraft number, DV name and title, passenger load, itinerary, departure time and crew reporting.

6.12.1.2.2. Intelligence. Political/military situation, airfield threat/security situation, terrorist or other threat advisories.

6.12.1.2.3. Special Requirements. Honors arrivals/departures, press, special FCG requirements, special immunizations.

6.12.1.2.4. Personal Requirements. Aircrew uniform/civilian clothing, passports/shot, records, FCIF review, per diem arrangements, approximate cost each station, billeting arrangements.

6.12.1.2.5. Normal Procedures. Cockpit discipline, communication with DV party, (only AC will brief contact officer on mission details, block times, adverse weather, etc.), aircraft cleanliness, student responsibilities, aircrew transportation (transportation officer), aircrew baggage security, un-manifested packages, sabotage/stowaway surveillance, hijacking, aircraft security, and surveillance for narcotics.

6.12.1.2.6. Emergency Procedures.

6.12.1.2.7. Crew Duties and Responsibilities. Designate enlisted aircrew coordinator and review duties (supervision of enlisted crewmembers, knowledge of crew location during crew rest, keep enlisted crew updated on mission changes), designate crewmembers to be responsible for trip kit, NAV kits, Crypto kits, F/A duties (confirm cabin service requirements, crew meals, crew payment arrangements), guard duties (obtain duty schedule, review aircraft access policies, brief FCG firearms restrictions), crew chiefs (confirm fuel load and aircraft configuration), and en route maintenance (AC will coordinate parts ordering).

6.12.1.2.8. Crew Conduct. Personal conduct in foreign areas and personal articles on aircraft.

6.12.2. En Route Briefings. Conduct crew briefings en route as required. Prior to entering crew rest, the AC will brief the crew on the requirements for the next mission leg. Route and leg briefings should be conducted for every leg prior to departure with applicable crewmembers or a designated representative for each crew specialty. ACs should keep on-board contacts informed of mission specifics, changes, problems, etc.. Use the following checklist as a guide for en route briefings:

6.12.2.1. Crew contact procedures during crew rest.

6.12.2.2. Departure time.

6.12.2.3. Crew reporting time and place (transportation arrangements).

6.12.2.4. Fuel load.

6.12.2.5. Uniform changes, if applicable.

6.12.2.6. F/A cabin service requirements.

6.12.3. Command Post Briefings. At show time, the AC or designated crew representative should contact the Andrews Command Post prior to departure for any last minute changes or crew/passenger messages.

6.12.4. Weather Briefings. See AFI 11-202 Volume 3 requirements. Obtain a briefing on current weather, trends, and forecasts for the proposed route, destination, and alternates. If the flight will tran-

sit non-Air Force bases, crews must make arrangements to ensure adequate weather support facilities and services are available. If adequate services are not available, crews will obtain weather support through any means available to ensure required weather data is in their possession prior to mission accomplishment. When face-to-face briefings are not possible, obtain a telephone weather briefing (precedence up to and including IMMEDIATE is authorized). **EXCEPTION**: verbal weather briefings are acceptable for local area training missions.

6.12.4.1. Weather information is permitted for use in the following order of precedence; US Military weather services, any FAA-approved weather source, or any host nation civil or military weather source.

6.12.5. NOTAM information is permitted for use in the following order of precedence; US Military services, any FAA-approved source (Jeppesen, Flight Service, etc.,), or any host nation civil or military source.

6.12.6. Buffer Zone. Prior to operating an aircraft within or adjacent to an established buffer zone, the pilot will ensure primary crew members are briefed on current buffer zone procedures outlined in appropriate directives.

6.12.7. Peacetime and Wartime SAFE PASSAGE Procedures. Pilots must be familiar with peacetime and wartime safe passage of friendly military aircraft (if applicable).

6.13. Call Signs.

6.13.1. Training Missions. Aircraft will use the static call sign VENUS followed by a 2-digit suffix assigned by tail number (See **Chapter 10** for assigned 2-digit suffixes). Use the assigned static call sign on all local flights including depot inputs and pickups. Use the static call sign on airlift missions when directed.

6.13.2. HQ USAF/CVAM directed Special Air Missions. Aircraft will use call signs assigned by OPORD, mission itinerary, or diplomatic clearance. Normally, when flying a SAM, aircraft will use the “SAM” call sign followed by the last digit of the year the aircraft was built and the last 4 digits of the aircraft tail number (or as required by diplomatic clearance). Complete flight plans as follows:

6.13.2.1. On the DD Form 1801, item 7, put the letter "S" followed by the last digit of the year the aircraft was built and the last 4 digits of the aircraft tail number.

6.13.2.2. On the DD Form 175, aircraft call sign block, put “S” followed by the last digit of the year the aircraft was built and the last 4 digits of the aircraft tail number.

6.13.2.3. NOTE. C-32 aircraft will use S91, S92, S93 and S94 depending on the tail number.

6.13.3. High Level DV Aircraft Call Signs. Use the following call signs per the following guidance:

6.13.3.1. Presidential Aircraft: Use the call sign “AIR FORCE ONE” (A1) when transporting the President of the United States on any aircraft.

6.13.3.2. Vice Presidential Aircraft: Use the call sign “AIR FORCE TWO (A2) when transporting the Vice President of the United States on any aircraft.

6.13.3.3. First Family Aircraft: Use the call sign “EXECUTIVE ONE FOXTROT” (EXEC1F) only when transporting members of the presidents immediate family on any aircraft within the CONUS, unless otherwise directed.

6.13.3.4. Foreign Heads of State: Use the call sign “SAM ZERO ONE” (S01) when transporting a foreign head of state or reigning royalty.

6.13.4. During radio transmissions, crews will use the call sign "SAM" followed by the last digit of the year the aircraft was built and the last 4 digits of the aircraft tail number, or the call sign as directed in paragraph **6.13.3.**

6.13.4.1. NOTE . C-32 aircraft will use SAM 91, 92, 93 and 94 depending on the tail number.

6.14. Instrument Flight Rules. Conduct flight operations under IFR to the maximum extent possible without unacceptable mission degradation. **EXCEPTION:** On training flights, VFR flight rules, VFR terminal area procedures, and visual patterns will be reviewed, practiced and de-briefed to ensure aircrew VFR flight proficiency and knowledge of VFR procedures and rules are maintained.

6.15. Flight Data Verification.

6.15.1. Aircrews should acquaint themselves with the mission and individual sortie requirements to ensure successful mission accomplishment. Wing and squadron staff should monitor crew activity and be available to resolve problem areas.

6.15.2. Computer Flight Plan (CFP) Use. Contracted CFPs or CFPs available from Det 1, AMC CPSS are the official sources of performance, navigation, and climatic data, including en route wind information. If stand-alone microcomputer based plans are used, each mission segment should utilize best wind data available. Only current, command validated (HQ AMC/DOV) microcomputer programs will be used for flights involving 89 AW MDS aircraft.

6.15.3. Flight crews may manually compute flight plans, use mainframe based or contracted CFPs, or utilize CFPs provided by the staff. CFPs should be utilized to the maximum extent practical. The flight crew has final responsibility for accuracy of the flight plan used.

6.15.4. CFPs will be verified by the flight crew for route definition and fuel computation accuracy prior to departure. Range summary charts will be used to determine the validity of CFP fuel burn rates.

6.15.5. Two crew members should verify takeoff and landing data.

6.16. Departure Planning:

6.16.1. Gross Weight. Ensure that the aircraft does not exceed the maximum gross weight, zero fuel weight, or center of gravity limitations specified in the applicable MDS aircraft flight manual. Gross weight may be further restricted by operating conditions such as wind shear, icing, temperature, pressure altitude, runway length and slope, airdrome weight bearing capacity, departure maneuvering, required climb gradients, and obstacles.

6.16.2. Specific ATC Departure Instructions/Climbout Performance. Appropriate terrain charts must be reviewed prior to departure. Regardless of the type of departure flown (SID, Radar Vector, IFR Departure Procedure, or VFR), the aircraft must be able to achieve the published climb gradient (for the runway to be used) with all engines operating, and be able to vertically clear all obstacles within the climb-out flight path with one engine inoperative.

6.16.2.1. EXCEPTION *:* See paragraphs **6.17.5.** If no minimum climb gradient is published, use 200 ft/NM (3.3%) minimum with all engines operating and 152 ft/NM (2.5%) minimum with

one engine inoperative. If a higher required climb gradient is published, use that climb gradient as the minimum with all engines operating, and use that climb gradient minus 48 ft/NM (.8%) as the minimum with one engine inoperative. This only works at fields having an instrument approach. If the field does not have an instrument approach, then no obstacle survey has been conducted; therefore, you don't know if 200/152 ft/NM is sufficient. At airfields with no instrument approach, an IFR departure is not authorized. In all cases, the minimum engine out climb gradient for 89 AW aircraft is 2.5% (152 ft/NM).

6.16.2.2. SIDs. OPRs for SIDs are identified on each individual SID. They are either Federal Aviation Administration (FAA), United States Army (USA), United States Navy (USN), United States Marine Corps (USMC), or United States Air Force (USAF).

6.16.2.3. Published IFR Departure Procedures. Published IFR Departure Procedures are available at some civil and military fields to assist in avoiding obstacles during climb to the minimum en route altitude (MEA). Airfields with Published IFR Departure Procedures will have the inverted triangle with a white "T" symbol printed on the approach plates and SIDS. When using Jeppesen publications, IFR Departure Procedures will be on the airfield diagram page, which is typically on the reverse side of the airport's first approach. A climb gradient and/or specific routing and/or alternate takeoff weather minimums will normally be specified with a Published IFR Departure Procedure. When flying a Published IFR Departure Procedure, depicted routing and climb gradients must be flown to avoid obstacles. The alternate takeoff weather minimums allow aircraft to depart with minimum ceiling and visibility. 89 AW MDS aircraft are not authorized to use these alternate takeoff weather minimums. Use takeoff minimums in accordance with AFI 11-202V3 that are not based on see-and-avoid criteria.

6.16.2.4. NOTE . If the Published IFR Departure Procedure does not include either a routing or a minimum climb gradient (i.e., it includes only alternate takeoff weather minimums) then an IFR departure from that airfield IS NOT AUTHORIZED unless you fly a SID, depart via radar vectors, or use a Diverse Departure (per AFI 11-202, Volume 3).

6.16.2.4.1. T-Procedures. Use of special departure routings developed by Jeppesen using FAA/ICAO criteria are authorized.

6.16.2.5. Specific ATC Departure Instructions (Specific climbout instructions or "radar vectors"). Crews may depart via specific ATC departure instructions, however, the SID prescribes a safe route of flight for a climb to the en route structure, while minimizing radio communication. Even if you plan to depart via specific ATC departure instructions, the crew should still have the SID on board (if published).

6.16.2.6. VFR Departures. VFR departures are authorized when required for mission accomplishment. The weather at takeoff must permit a VFR climb to an IFR MEA, an appropriate IFR cruising altitude or an altitude where radar vectors can be provided.

6.16.2.6.1. NOTE . In no case will VFR departures be flown in lieu of obstacle clearance planning.

6.16.3. Screen Heights Requirements. From a performance computation point of view, required screen heights are in essence obstacles and will be treated as such in addition to any other physical obstacles for the departure. Decrease the runway available by that distance required to reach the Departure End of Runway (DER) at the required screen height. This distance can be computed from

the climb-out flight path charts in the performance manual. Use the following as a guide to determine required screen heights.

6.16.3.1. NOTE. Screen height requirements for departures other than those listed below vary. There is no standard or easy way for crews to determine required screen height requirements at some airfields. Therefore, when using departures other than those listed below, plan to cross the DER at 35 feet (minimum) unless you can ascertain a different screen height requirement from the appropriate authority.

6.16.3.2. SIDs. Required Screen heights depend on the SID publishing agency.

6.16.3.2.1. USAF, USN, or USMC SID: Zero feet.

6.16.3.2.2. US Army and FAA SID: 35 feet. Foreign Civil or Military SID (must be an ICAO member nation listed in FLIP GP): 16 feet.

6.16.3.3. Radar Vector, Published IFR Departure Procedure or VFR Departures.

6.16.3.3.1. USAF, USN, or USMC Airfield: Zero feet.

6.16.3.3.2. US Army or FAA Civil Airfield: 35 feet.

6.16.3.3.3. Joint Use Airfield within the United States: 35 feet.

6.16.3.3.4. Foreign Civil or Military Airfield (must be an ICAO member nation listed in FLIP GP): 16 feet.

6.16.4. Unable to Meet Required Screen Heights. If aircraft performance prohibits aircraft from meeting the required screen height the proposed route of flight must be examined using current aeronautical and terrain charts to ensure aircraft performance is sufficient to clear ALL obstacles.

6.16.5. Climb-out Performance. 89 AW MDS specific climb performance is not linear. Performance manual gradients represent a snap shot view of the aircraft's climb capability at the instant the gear is fully retracted and a minimum of 400 feet AGL. Since aircraft climb-out is **not** linear, do not equate required climb gradient to aircraft climb profile. The only way to ensure obstacle clearance is to plot all significant obstacles on the climb-out flight path charts contained in the performance manual. If there is any doubt about the aircraft's ability to clear all obstacles in the event of an engine failure, plan an engine out, visual escape route that includes the departure and emergency return routing.

6.17. Obstacle Clearance Planning:

6.17.1. Obstacle Identification Surface (OIS). Obstacle identification for SID purposes (FAA Handbook 8260.3B, AFM 55-9, UV *Standard for Terminal Instrument Procedures (TERPS)*) are those objects that penetrate an OIS of 40:1 (152 feet per NM). Calculation of the OIS on a SID continues until the SID reaches a MEA or until the SID terminates. Climb gradients of 200 feet per NM, or published climb gradients, will provide at least 48 feet per NM clearance above all obstacles that do not penetrate the OIS. The aircraft commander must be aware and thoroughly brief the crew on all obstacles along the departure flight path.

6.17.1.1. The Airfield Suitability and Restrictions Report (ASRR) is an excellent source for obstacle information; however, it is not a stand alone document. It is intended to supplement published climb gradients and obstacle information found on SIDs, Published IFR Departure Procedures, and terrain charts.

6.17.1.2. Aircrews may call 89 OG/OGOF or HQ AMC/DOVS (DSN 576-4508) for more airfield obstacle data.

6.17.2. Objects may or may not be depicted. (They definitely will not be depicted on civil procedures) Objects that are not depicted still require careful consideration in takeoff planning since aircraft climb-out is not linear. The only way to ensure obstacle clearance on any departure is to plot all significant obstacles.

6.17.3. SIDs simplify ATC procedures while providing safe routing to the en route structure; however, SIDs should not be used as the sole source of obstacle information for departure planning. If used as such, inadequate (engine out) obstacle clearance may result. SIDs, instrument approach plates, and topical sectional charts, must be used to determine the distance and height values for all significant obstacles along the flight path.

6.17.4. Obstacles are not normally depicted on SIDs when climb gradients of less than 152 feet per NM are required to clear them.

6.17.5. Before flying any departure, the aircrew will compute takeoff data in the following manner:

6.17.5.1. Using the performance manual climb-out flight path charts, compute the required engine out climb gradient to clear all obstacles. Review appropriate terrain charts, the ASRR, instrument approaches, sectionals, departure plates, etc. to determine obstacles.

6.17.5.2. If a screen height is required (see paragraphs **16.3.** and **16.3.1.**), compute the minimum engine out climb gradient required to meet it.

6.17.5.3. Utilizing the higher of the computed climb gradient from steps 6.17.5.1 and 6.17.5.2, compute normal engine out performance. You must also verify that the aircraft's all engine climb gradient capability meets the minimum required/published all engine climb gradient.

6.17.5.4. If the computed engine out performance (6.17.5.3.) does not exceed the required engine out climb gradient, you may still depart if the aircraft can meet or exceed the required all engine climb gradient. The crew may depart only if **ALL** of the following conditions are met:

6.17.5.4.1. Day/VFR conditions exist on the entire departure and planned emergency return routing.

6.17.5.4.2. The aircraft is (still) capable of achieving the minimum published climb gradient (200 ft/NM if none published) with all engines operating.

6.17.5.4.3. The aircraft commander has determined through a review of all applicable maps and charts that, in the event of an engine failure, the planned departure and emergency return routing will allow for obstacle avoidance.

6.17.5.4.4. The planned emergency route is briefed to the entire crew.

6.17.5.4.5. NOTE. In this case, little or no margin of safety exists.

6.17.5.4.6. If the aircraft is unable to clear all obstacles engine out, the crew will consider the following:

6.17.5.4.6.1. Downloading cargo.

6.17.5.4.6.2. Downloading fuel.

6.17.5.4.6.3. Delaying the mission until climatological conditions allow for sufficient performance.

6.17.5.5. In the event of an engine failure, aircrews will advise ATC of their inability to comply with the required climb gradient. Request radar vectors and/or avoid all obstacles.

6.18. (Not Used).

6.19. Takeoff Minimums and Departure Alternates.

6.19.1. Weather Minimums for Takeoff. Aircraft may takeoff using the following minimums.

Table 6.2. Takeoff Weather Minimums

Mission	Visibility	Remarks
HQ USAF/ CVAM Directed Missions	RVR 600 (175 meters)	When less than RVR 1000, but equal to or greater than RVR 600, the crew may take off, provided the runway has a minimum of 2 functioning RVR readouts (minimum RVR 600 on all functioning readouts) and runway centerline lighting is operational. When 3 transmissometers are installed, all are controlling.
Operational Missions	RVR 1000 (300 meters)	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off, provided the runway has a minimum of 2 functioning RVR readouts (minimum RVR 1000 on all functioning readouts) and runway centerline lighting is operational.
All Others	RVR 1600 (490 meters)	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all.

6.19.2. When weather is below approach and landing minimums (ceiling or visibility), but RVR is 16 or greater (visibility 1/4 mile or greater) a departure alternate is required. Do not use CAT II/III minimums to determine if a departure alternate is required.

6.19.3. Suitability of Departure Alternates. When a departure alternate is required, the aircraft must be capable of maintaining the MEA or MOCA whichever is higher, to the alternate using one engine out performance criteria. To qualify as a departure alternate the airfield must meet one of the following conditions:

6.19.3.1. Existing weather at an alternate within 30 minutes flying time must be equal to or better than the published approach minimums and forecast to remain so until 1 hour after takeoff, but in no case forecast to be lower than 200-1/2 (RVR 2400), or;

6.19.3.2. The existing weather at an alternate within 1 hour flying time (C-9, C-37, C-20, C-32) or 2 hours flying time (C137, VC-25A) must be at least 500-1 above the lowest compatible published approach minimums, but in no case lower than 600-2 for a precision approach or 800-2 for a non-precision approach, and forecast to remain so for 1 hour after ETA at the alternate.

6.19.3.3. Airfield and Aircraft Approach Capability. For IFR departures, the approach facility upon which weather minimums are based must be operational at the departure and alternate airports and the necessary aircraft approach equipment must also be operational.

6.20. Destination Requirements *(for filing purposes).* The forecast destination weather will be according to AFI 11-202, Volume 3 and the following:

6.20.1. File two alternates when:

6.20.1.1. The forecast weather is less than required minimums for the lowest compatible approach.

6.20.1.2. The forecast surface winds (intermittent or prevailing) exceed limits corrected for RCR.

6.20.2. File an alternate, regardless of forecast weather, when the departure or destination aerodrome is outside the 48 conterminous states.

6.20.3. When filing to a remote or island destination, aircrews will use 1+15 holding fuel (in lieu of an alternate and 45 minutes holding fuel). A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military) within 2 hours flying time. The forecast weather at the remote or island destination must meet the following criteria:

6.20.3.1. The prevailing surface winds, corrected for RCR, must be within limits at ETA and forecast to remain so for 2 hours thereafter, and

6.20.3.2. The prevailing ceiling and visibility must be equal to or greater than published minimums for an available non-precision approach (excluding ASR), for ETA plus 2 hours.

6.20.3.3. NOTE. If a precision approach is available, the ceiling or visibility may be intermittently below non-precision approach minimums (excluding ASR), but not below precision approach minimums (for ETA plus 2 hours).

6.20.4. When filing to a destination where the alternate is located in Alaska or at latitudes greater than 59 degrees, aircrews will use 1+15 holding fuel in lieu of 45 minutes holding fuel.

6.20.5. Compute holding fuel using planned destination gross weight.

6.21. Adverse Weather.

6.21.1. Except when using commercial Type II de-icing fluids, takeoff in freezing drizzle is prohibited. Refer to Flight Manual for further limitations.

6.21.2. During flight, use any means available to avoid thunderstorms by at least:

6.21.2.1. 20 NMs at or above flight level (FL) 230.

6.21.2.2. 10 NMs below FL 230.

6.21.3. Do not fly directly above (within 2,000 feet) thunderstorms or cumulonimbus clouds. If unable to vertically clear thunderstorms or cumulonimbus clouds by at least 2000 feet, you must avoid them by using the above criteria.

6.21.3.1. NOTE. Aircraft damage may occur 20 miles or more from any thunderstorms. Aircrews must familiarize themselves with information on thunderstorm development and hazards. Refer to AFH 11-203, *Weather for Aircrews*.

6.21.4. In order to minimize exposure to thunderstorm hazards when approaching or departing an airport in an area where thunderstorms are occurring or are forecast:

6.21.4.1. Attempt to maintain VMC.

6.21.4.2. Maintain at least 5 NMs separation from heavy rain showers.

6.21.4.3. Avoid areas of high lightning potential, i.e. clouds within plus or minus 5,000 feet (or temperatures ± 8 Degrees C) of the freezing level.

6.21.4.4. NOTE. Approaches or departures may be accomplished when thunderstorms are within 10 NMs. The thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts fronts, heavy rain, wind shear, or microbursts) at the airport, and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable).

6.21.5. Aircrews performing approaches and landings at locations where temperatures are 0 degrees centigrade or below will refer to the Flight Information Handbook, section D, Temperature Correction Chart, to correct minimum descent altitude (MDA), decision height (DH), and other altitudes inside the final approach fix (FAF) if required.

6.21.6. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence. Crews should use good judgment when flying into any area conducive to mountain wave turbulence, and avoid these areas of potential turbulence when possible.

6.21.6.1. Mountain wave turbulence is normally a predictable condition. Forecasters at base weather stations, using guidance products from weather centers, can advise crews of the potential for encountering mountain wave turbulence along planned routes of flight.

6.21.6.2. Weather data availability in mountainous regions and forecast model limitations prevent the prediction of all events.

6.21.6.3. Crews must be familiar with the causes of mountain wave turbulence and the characteristic clouds that generally forewarn its presence.

6.21.7. Flight into areas of forecast or reported severe icing or severe turbulence are prohibited.

6.21.8. Turbulence. Knowledge of the tropopause flight level will help in altitude planning to avoid turbulent flight areas. Ask the weather briefer for the tropopause flight level whenever possible. Turbulence can be expected ±4000 feet of this altitude.

6.22. Fuel Conservation.

6.22.1. Conservation of fuel requires everyone's active participation. For every pound of excess fuel, 3 percent of the excess will be burned each hour. Do not carry extra fuel for convenience.

6.22.2. Cruise speed. Normal cruise speeds are as follows: C-9: mach 0.78; C-20/C-37/C-137C: mach 0.80; C-137B: mach 0.82; C-32: mach 0.80, VC-25A: mach 0.84. Use high speed cruise only when needed to satisfy the requirements of the DV.

6.22.3. Extra fuel (identified extra) may be added to Required Ramp Fuel Load (RRFL):

6.22.3.1. When fuel availability is limited or not available at en route stops.

6.22.3.2. When compressed ground times during single multi-day sortie missions preclude refueling at en route stops.

6.22.3.3. When en route refueling would delay or be detrimental to mission accomplishment.

6.22.3.4. For known holding delays in excess of standard.

6.22.3.5. For anticipated off course weather avoidance to include avoidance of forecast turbulence detrimental to passenger comfort.

6.22.3.6. If decompression with passengers would cause a descent to an unplanned altitude resulting in consumption in excess of planned fuel; add fuel to recover at a suitable alternate at the appropriate altitude.

6.22.3.7. To offset increased fuel consumption due to icing.

6.22.3.8. When destination NAVAIDS, ATC services, or landing aids are unreliable or insufficient.

6.22.4. Planning guidelines for fuel conservation:

6.22.4.1. Use optimized CFPs when possible.

6.22.4.2. Long range cruise (LRC) and optimum altitude should be flown.

6.22.4.3. Limit the use of the APU when possible.

6.22.4.4. Delay engine start.

6.22.4.5. Cruise CG should be aft if practical.

6.22.4.6. Fly en route descents when possible.

6.22.5. Fuel loads. Use the following guidance when fuel planning for 89 AW MDS aircraft:

Table 6.3. C-9 CONUS/C-32 Fuel Loads.

Fuel Load Component	MDS Aircraft Type	
	C-9 (CONUS Except Alaska)	**C-32**
APU, Start, Taxi, Takeoff	Use appropriate block-to-block "flight planning chart" from the flight manual.	900 lbs
En Route (See ***NOTE*** 6.22.5.1.1.)	Use appropriate block-to-block "flight planning chart" from the flight manual.	Use simplified flight planning chart - mach .80 or LRC
En Route Reserve	Not applicable	Fuel for 10 percent of flight time over category I route/ route segments not to exceed 1 hour at normal cruise.

Fuel Load Component	MDS Aircraft Type	
Alternate, If required and the destination weather is at or above the published ceiling and visibility minimums (See ***NOTE*** 6.22.5.1.2.) **OR**	Use the "reserve fuel from 10,000 feet" chart.	Use simplified flight planning chart - alternate planning, long range cruise. 2500 lbs minimum. Missed approach fuel is included..
Missed Approach plus **Alternate**, if destination weather is below published ceiling or visibility minimums. (See ***NOTE*** 6.22.5.1.2.)	Use "reserve fuel from sea level" chart	
Reserve	4,000 lbs when no alternate is required. This includes 45 minutes reserve and approach /landing fuel. When an alternate is required, reserve and approach /landing fuel is included in alternate fuel figures.	4,500 lbs when no alternate is required. This includes 45 minutes reserve and approach /landing fuel. When an alternate is required, reserve and approach /landing fuel is included in alternate fuel figures.
Holding	45 minutes fuel using endurance or holding charts. When holding in lieu of an alternate is required, or when the alternate is located in Alaska or latitudes greater than 59 degrees north/south, use 1+15 fuel. Holding fuel should be computed at the alternate. See Note **6.22.5.1.3.**	
Known Holding Delays	Fuel for planned holding when delays are anticipated en route or at high traffic density airports.	
Minimum fuel required over destination or over alternate (if required)	4,000 lbs	Fuel for planned holding plus approach and landing.

6.22.5.1. NOTE.

6.22.5.1.1. Include all planned off course maneuvering for departure or en route deviations.

6.22.5.1.2. If two alternates are required, compute fuel from destination to most distant alternate.

6.22.5.1.3. C-32 holding at 0+45 is based on 10,000 MSL; holding at 1+15 is based on 20,000 MSL.

Table 6.4. C-9 Non-CONUS/C-20/C-37 Fuel Loads.

Fuel Load Component	MDS Aircraft Type	
	C-9 (Non-CONUS and Alaska)	**C-20/C-37**
APU, Start, Taxi, Takeoff	Use appropriate block-to-block "flight planning chart" from the flight manual.	500 lbs
En Route (See ***NOTE*** **6.22.5.2.1.**)	Use appropriate block-to-block "flight planning chart" from the flight manual.	Fuel for planned climb and cruise to overhead destination at cruise altitude or initial approach fix altitude.
En Route Reserve	Fuel for 10 percent of flight time over category I route/route segments not to exceed 1 hour at normal cruise.	
Alternate, If required and the destination weather is at or above the published ceiling and visibility minimums. (See ***NOTE*** **6.22.5.2.2.**) **OR**	Use the "reserve fuel from 10,000 feet" chart.	Fuel from overhead destination to the alternate at planned speed and altitude.
Missed Approach plus **Alternate**, if destination weather is below published ceiling or visibility minimums. (See ***NOTE*****6.22.5.2.2.**)	Use "reserve fuel from sea level" chart.	500 lbs plus fuel from destination to alternate using charts for planned climb and cruise profile.
Holding (See ***NOTEs*** ***6.22.5.2.3.***, ***6.22.5.2.4.***, **6.22.5.2.5.**)	45 minutes fuel using endurance or holding charts. When holding in lieu of an alternate is required, or when the alternate is located in Alaska or latitudes greater than 59 degrees north/south, use 1+15 fuel. Holding fuel should be computed at the alternate.	
Approach and Landing	Included in "flight planning chart"	500 lbs
Known Holding Delays	Fuel for planned holding when delays are anticipated en route or at high traffic density airports.	
Minimum fuel required over destination, or over alternate (if required)	4,000 lbs	Fuel for planned holding plus approach and landing or 3,000 lbs, whichever is greater.

6.22.5.2. NOTE.

6.22.5.2.1. Include all planned off-course maneuvering for departure or en route deviations. If not on CFP, C-20s, use 50 pounds per minute.

6.22.5.2.2. If two alternates are required, compute fuel from destination to most distant alternate.

6.22.5.2.3. C-9: "Reserve fuel from sea level" and "reserve fuel from 10,000 feet" charts include 45 minutes holding fuel.

6.22.5.2.4. C-9: When 1+15 holding is required, enter "flight planning chart" with total distance from departure to destination; then "block fuel" to alternate (if required, add fuel from "reserve fuel hold over destination")

6.22.5.2.5. C-20/C-37: 45 minutes holding is figured at 10,000 feet MSL; 1+15 holding is figured at 20,000 feet MSL.

Table 6.5. C-137/VC-25A Fuel Loads.

Fuel Load Component	MDS Aircraft Type	
	C-137	**VC-25A**
APU, Start, Taxi, Takeoff	2,000 lbs (See ***NOTE 6.22.5.3.1.***)	
En Route (See ***NOTE*** 2)	Fuel for planned climb and cruise to the begin descent point or to overhead destination at cruise or initial approach fix altitude.	
En Route Reserve	Fuel for 10 percent of flight time over category I route/route segments not to exceed 1 hour at normal cruise.	
Alternate, If required and the destination weather is at or above the published ceiling and visibility minimums. (See ***NOTE*** **6.22.5.3.3.**) **OR** **Missed Approach** plus **Alternate**, if destination weather is below published ceiling or visibility minimums (See ***NOTE*** **6.22.5.3.3.**).	Use fuel planning/alternate charts in the flight manual. Missed approach fuel is always included. 3,500 lbs minimum.	Use fuel planning/alternate charts in the flight manual. Missed approach fuel is always included. 5,000 lbs minimum.
Holding	45 minutes fuel using endurance or holding charts. When holding in lieu of an alternate is required, or when the alternate is located in Alaska or latitudes greater than 59 degrees north/south, use 1+15 fuel. Holding fuel should be computed at the alternate.	
Approach and Landing	C-137C: 3,000 lbs	2,500 lbs
Known Holding Delays	Fuel for planned holding when delays are anticipated en route or at high traffic density airports.	
Minimum fuel required over destination, or over alternate (if required)	Fuel for planned holding plus approach and landing.	

6.22.5.3. NOTE.

6.22.5.3.1. Acceleration fuel for takeoff is included in the en route fuel.

6.22.5.3.2. Include all planned off course maneuvering for departure or en route deviations. If not included in CFPs, add 300 lbs per minute for the C-137 and 500 lbs per minute for VC-25A.

6.22.5.3.3. If two alternates are required, compute fuel from destination to most distant alternate.

6.22.5.4. Standard Ramp Fuel Loads. This is normally the minimum fuel load for all missions departing Andrews AFB. If you require less than the standard fuel load due to runway length or conditions at nearby destinations, notify the squadron operations center or command post immediately. They will advise maintenance who will take action to refuel or de-fuel your aircraft to desired fuel load. Aircraft will not be de-fueled solely for the purposes of fuel conservation. Standard ramp fuel loads, planned local training flying times, scheduled ground times between locals, and minimum landing fuel are **Table 6.6.**

Table 6.6. Standard Ramp Fuel Loads.

	Fuel Load	Flying Time	Ground Time	Minimum Fuel
C-9	31,000 lbs	3.0 hours	1.5 hours	4000 lbs
C-20B	18,000 lbs	3.0 hours	1.5 hours	3000 lbs
C-20H	16,000 lbs	3.0 hours	1.5 hours	3000 lbs
C-37	16,000 lbs	3.0 hours	1.5 hours	3000 lbs
C-32	40,000 lbs	3.0 hours	1.5 hours	4500 lbs
C-137C	68,000 lbs	3.0 hours	2.0 hours	10,000 lbs
C-137C	82,000 lbs	4.0 hours	2.5 hours	10,000 lbs
VC-25A	As determined by 89 AW Presidential Pilots Office			

6.23. Standby/Alert Mission Pre-departure Procedures. Standby/Alert missions include any mission where the scheduled departure time is less than 12 hours after original notification. Procedures for standby/alert missions will vary depending on the type mission, type of aircraft and time available between notification and departure. Procedures also vary depending on time of day (i.e., duty hours or non-duty hours). The following general procedures apply in most cases:

6.23.1. The standby/alert aircraft commander will be notified of an standby/alert mission by 89 OG/OGO duty officer, Andrews Command Post duty controller, SOC duty officer, or aircrew scheduler. When notified, the following will be covered:

6.23.1.1. The mission number, departure spot, expected departure time, DV name and position, and number of passengers. If the mission is supporting another SAM aircraft, you may be instructed to log mission symbol S-7, and you will not be given a mission number.

6.23.1.2. The itinerary details which are available. You may be asked to confirm times, airports, preferred FBOs, etc.

6.23.1.3. Fuel load requirements.

6.23.1.4. Threat assessment and airfield security information as applicable.

6.23.1.5. Items you want briefed to your crew members during notification. You should specify aircrew uniform or civilian clothes.

6.23.2. F/As normally require cash for purchases. Cash is available from the command post or 89 OG/RA In-flight Service Fund (ISF) during duty hours. If they will not require cash, they should be briefed to bypass command post/DOP and report directly to their duty section.

6.23.3. For immediate C-32/C-20/C-37 launches overseas during duty hours, the scheduler will arrange for passports, shot records and navigation kits to be delivered to the aircraft. After duty hours, the copilot will pick up passports, shot records and navigation kits. For C-137 missions, the copilot will pick up the trip kit and the navigator will pick up the navigation kits. Confirm who will handle pre-launch paperwork. Normally, the duty scheduler (during duty hours) or the command post (after duty hours) will order a weather briefing and AMC computer flight plans, if required. Current NAT track messages are always available at the command post. For C-32/C-20/C-37 missions departing immediately, the duty scheduler (during duty hours) or the command post (after duty hours) will file a flight plan for the first mission leg. The crew must arrange desired JETPLAN service themselves. The duty scheduler will assist in obtaining JETPLANs when requested. During duty hours, the duty scheduler will coordinate with 89 OG/OGOF to prepare and dispatch diplomatic clearance and advance notice messages. After duty hours, the command post controller will arrange to handle messages. If you have adequate notice prior to departure, you may accomplish pre-launch flight planning yourself.

6.23.4. The duty scheduler (during duty hours) or the command post controller (after duty hours) will notify the rest of the crewmembers. They will be briefed on the mission/aircraft numbers, departure time, where the aircraft is/will be spotted, required fuel load, general itinerary and number of days away, and any items the aircraft commander has designated for briefing.

6.23.5. Standby/alert crewmembers may also be replaced at the last minute by 89 AW/PP personnel.

6.23.6. Crewmembers normally report as follows unless briefed otherwise:

6.23.6.1. Aircraft commanders report to base operations to pick up the weather briefing package, file a flight plan (if required), then report to the aircraft. C-32/C-20/C-37 copilots normally report directly to the aircraft for ASAP launches. For overseas missions, after duty hours, they must first pick up passports/shot records, crew orders, and navigation kits, and then report to the aircraft. Copilots on other missions normally report to the Squadron Operations Center to pick up required items, then proceed to the aircraft. Copilots monitor aircraft preparation and assist as needed (TOLD cards, weight and balance, etc.).

6.23.6.2. Navigators report to 89 OG/OGOF to assemble navigation kits as required and check on messages. Time permitting, proceed to base operations to assist the aircraft commander in filing. Otherwise, proceed to the aircraft.

6.23.6.3. Flight engineers/mechanics/crew chiefs report directly to the aircraft to monitor fueling and reconfiguration, and accomplish preflight inspections. Keep the command post advised of any aircraft problems.

6.23.6.4. Communications system operators pick up crypto kits and report to the aircraft for preflight. They act as the crew monitor and notify the command post and aircraft commanders if crewmembers do not report within a reasonable time.

6.23.6.5. Flight attendants report to their duty section to pick up supplies and beverage kits. During duty hours, the duty scheduler will arrange for another F/A to assist with commissary goods and aircraft preparation. Do not delay reporting for shopping. Aircraft preparation is the most important priority. Use the in-flight kitchen for bulk food/frozen meals. Obtain cash advances from the 89 OG/RA (duty hours) or from the command post (non-duty hours). Order fleet service and report to the aircraft.

6.23.7. Pilots should ask clearance delivery for a full route clearance when the command post or the aircrew scheduler files the flight plan.

6.24. Crew Station Times. The AC or a designated crewmember will have the flight plan on file not later than one hour prior to departure (2 hours for DD Form 1801). Crewmembers will normally be at their duty stations with all checklists accomplished up to the point of engine start not later than 30 minutes prior to departure. Crewmembers will be prepared to depart as expeditiously as is safely possible if the DV arrives early.

Section 6C—Preflight

6.25. AFTO Form 781, AFORM Aircrew/Mission Flight Data Document. Review the AFTO Form 781 before applying power to the aircraft or operating aircraft systems. The exceptional release must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian normally signs the exceptional release. If one of these individuals is not available, the aircraft commander may sign the exceptional release. Ensure that the Air Force fuel card is aboard the aircraft.

6.26. Aircraft Servicing and Ground Operations.

6.26.1. Aircraft Refueling and Defueling. Qualified FEs, FMs, and crew chiefs are authorized to refuel or de-fuel their aircraft. Comply with the appropriate dash-2 aircraft T.O.s and TO 00-25-172.

6.26.2. Concurrent Ground Operations. Simultaneous refueling or de-fueling while maintenance operations are being performed is authorized according to T.O. 00-25-172.

6.26.2.1. Aircrew members are authorized to enplane or deplane during fuel servicing to perform mission essential duties.

6.26.2.2. Aircrew personnel are authorized to conduct "power off" portions of inspections during servicing when essential to meet operational turn-around requirements. (Reference TO 00-25-172, paragraph 4.12.)

6.26.2.3. Passengers may remain on board the aircraft during refueling, provided they are briefed on the hazards of the operation and given the option to deplane prior to refueling. Passengers will not enplane or deplane during fueling operations unless absolutely necessary and escorted by an aircrew member. A standby fire truck is required (Reference TO 00-25-172, paragraph 6.10c).

6.26.3. En Route Aircraft Preflights. Flight engineers/flight mechanics, crew chiefs and CSOs will accomplish aircraft preflights following crew rest. If the ground time will exceed 72 hours or if the aircraft has been left unattended, aircrews should accomplish an aircraft inspection/walk-around of the aircraft within 24 hours of scheduled departure when practical. Anytime en route maintenance has been performed, the affected systems will be pre-flighted and should be operationally checked as soon as possible if practical. Thru-flight inspections will be completed anytime a preflight is not required.

F/As only need to accomplish a thru-flight inspection at en route stops. Pilots will ensure flight controls are checked during the taxi checklists.

6.27. Oxygen Requirements. The minimum quantity of oxygen aboard an aircraft before takeoff must be sufficient to accomplish the planned flight from the equal time point (ETP) to recovery should oxygen be required.

6.28. Fleet Service Equipment. Ensure required fleet service items are aboard prior to departure.

6.29. Crash Position Indicators (CPI) and Emergency Locator Transmitters (ELT). CPIsand ELTs must be operative for all flights except those remaining in the local area. If a CPI or ELT deploys or activates inadvertently, notify the ATC agency immediately. In the case of a deployed CPI, if the aircraft is scheduled to fly a local or is en route with no replacement airfoil available and the airplane is permitted to continue the mission, a locally manufactured airfoil should be installed over the missing CPI.

6.29.1. Flight data recorder (FDR) and cockpit voice recorder (CVR) systems, if installed, should be operative prior to departure and operated continuously from the start of the takeoff roll until the aircraft has completed landing roll at destination. If en route failure occurs, continue the mission to a station where adequate repairs can be made. If involved in a mishap or incident, open the CVR power circuit breaker after landing and after terminating the emergency. CVR recordings are privileged communications and are to be used solely for mishap prevention purposes. CVR recordings may not be used for disciplinary action according to AFI 91-204, *Investigating and Reporting US Air Force Mishaps.*

6.30. Handling of Classified Cargo, Registered Mail, NMCS/VVIP/FSS Shipments, and Courier Material.

6.30.1. These shipments are normally not carried on 89 AW passenger aircraft. 89 AW ACs may accept or decline shipments at their discretion based on mission requirements or crew or aircraft capabilities. Receipts will be obtained for classified cargo, NMCS/VVIP/FSS shipments, signature services, and registered mail at the on-load and off-load station using the cargo manifest.

6.30.1.1. Defense Courier Service (DCS) couriers are authorized to designate officer and enlisted (E-5 and above) crew members on military aircraft as couriers to escort and safeguard courier material when other qualified personnel are not available. Qualified passengers will be designated prior to designating crew members. The following restrictions apply.

6.30.1.1.1. Primary crew members will not be designated without the consent of the aircraft commander.

6.30.1.1.2. Crew members on aircraft scheduled to stop at locations where DCS couriers cannot provide en route support will not be designated as couriers. This does not relieve the aircraft commander of the responsibility for life and death urgent shipments.

6.30.2. During stops at en route locations supported by DCS stations, DCS couriers are required to meet designated couriers to protect the material.

6.30.2.1. During unscheduled stops, crew members may place courier material in temporary custody of the following agencies listed in descending order of priority:

6.30.2.1.1. DCS courier.

6.30.2.1.2. TOP SECRET control officer of the US armed forces.

6.30.2.1.3. US Department of State diplomatic courier.

6.30.2.1.4. US Department of State activity.

6.30.2.1.5. US military guards.

6.30.2.1.6. US DoD civilian guards.

6.30.3. If unable to follow the itinerary to the destination of the courier material, or if material is lost, stolen, or otherwise compromised, report circumstances to the nearest armed forces courier station and notify the local US military commander or US government activity.

Section 6D—Departure

6.31. On Time Takeoffs. A delay is charged any time the DV and passengers are ready to move at the scheduled departure time and the aircraft is not ready for departure or cannot depart due to maintenance or operational problems.

6.31.1. Special Air Missions delays. The simplest definition of a SAM delay is a failure to block out when the DV is ready at the scheduled time due to maintenance or operational reasons, thus delaying the DV. To promote the credibility of our reliability rate the following will be considered delays:

6.31.1.1. A SAM delay is credited when the mission blocked out "on-time" but could not takeoff due to maintenance or operational reasons, thus delaying the DV.

6.31.1.2. A SAM delay is credited when the mission blocked out "early" but could not takeoff due to maintenance or operational reasons, thus delaying the DV. The DV party should expect departure any time after stations time (30 minutes prior to scheduled takeoff time), or any time the crew has agreed (explicitly, or by loading the party, closing the door and implying readiness for departure) to depart early. If the party arrives prior to stations time and the crew is not ready a delay will not be charged. When the crew indicates they are ready (i.e. boarding party, closing door, removing stairs, starting engines, etc.), further delay would constitute a SAM delay.

6.31.1.3. A SAM delay is credited when the mission blocked out and took off "on-time" but air aborted or diverted to an airport other than the next scheduled stop due to maintenance or operational reasons, thus delaying the DV.

6.32. C-32/C-137 Cabin Security Procedures During Takeoff and Landing. The following procedures should be followed for all takeoffs and landings:

6.32.1. The F/A should assure all carry-on luggage and supplies are secured as soon as possible after boarding passengers. Ensure all passenger carry on baggage is stowed to prevent a hazard during emergency landings, i.e.. blocking an exit or emergency equipment. Notify the AC when excessive top side precludes safe stowage.

6.32.2. The 1st F/A will coordinate with the aircraft commander the anticipated taxi time prior to commencing any cabin service prior to takeoff.

6.32.3. The 1st F/A should notify the cockpit crew that the cabin is secure prior to being seated for takeoff or landing. The cockpit crew should confirm the cabin security report prior to takeoff and

landing. At the pilots discretion, if conditions warrant, i.e., immediate takeoff clearance, the pilot may alert the passengers and crew using the PA system.

6.33. (Not Used).

Section 6E—En route

6.34. Flight Progress.

6.34.1. Prior to flight, plot the oceanic portion of the flight on an appropriate chart. Annotate the chart with the mission number, aircraft commander's name, preparer's name, and date. If practical, chart may be reused.

6.34.2. Anytime waypoint data is inserted into the INS, it will be verified by two primary crew members. Check both the coordinate information and the distances between waypoints against the flight plan.

6.34.3. In-flight, use all available navigational aids to monitor INS performance. Immediately report malfunctions or any loss of navigation capability which degrades centerline accuracy to the controlling ARTCC. Use the following procedures for flight progress:

6.34.3.1. Obtain a coast out fix prior to, or immediately on entering the Category I Route or over-water segment. Perform a gross error check using available NAVAIDS and annotate the position and time on the chart.

6.34.3.2. When approaching each waypoint, recheck coordinates for the next waypoint Approximately 10 minutes after passing each oceanic waypoint, record and plot the aircraft position and time on the chart, and ensure compliance with courses and ETA tolerances.

6.34.3.3. If a revised clearance is received, record and plot the new route of flight on the chart.

6.34.4. Upon return to home station, turn in the charts (copies if reused) and applicable computer flight plans to the squadron DOV. Squadrons DOV will retain the charts, CFPs, and associated materials for a minimum of 3 months.

6.34.5. Operations in International/Territorial Airspace. (See FLIP, FCG, AP, and MDS series instruction for further guidance) US military aircraft and DoD personnel entering another nation to conduct US government business therein must have the approval of the foreign government concerned to enter their airspace. Foreign clearances for US international air operations are obtained through US officials known as Defense Attaché Officers (DAOs). Refer to FLIP GP for discussion of international strait passage, archipelagic sea lane passage, procedures to follow if intercepted, and other foreign sovereignty issues.

6.34.5.1. There are essentially two types of airspace: international airspace and territorial airspace. International airspace includes all airspace seaward of coastal states' territorial seas. Military aircraft operate in such areas free of interference or control by the coastal state. Territorial airspace includes airspace above territorial seas, archipelagic waters, inland waters, and land territory and is sovereign airspace. Overflight may be conducted in such areas only with the consent of the sovereign country.

6.34.5.2. Consistent with international law, the US recognizes sea claims up to 12 nautical miles. Diplomatic constraints and/or a lack of diplomatic clearances usually result in missions operating

in international airspace. Because of this, it is imperative sufficient information be provided far enough in advance to allow compliance with FCG requirements established by the countries concerned. The US does not normally recognize territorial claims beyond 12 nautical miles; however, specific guidance from certain US authorities may establish limits which differ from the standard.

6.34.5.3. Flight Information Region (FIR). An FIR is defined as an area of airspace within which flight information and related services are provided. An FIR does not reflect international borders or sovereign airspace. Aircraft may operate within an established FIR without approval of the adjacent country, provided the aircraft commander avoids flight in sovereign airspace.

6.34.5.4. Aircrews on a flight plan route which takes them from international airspace into territorial airspace for which approved aircraft clearances were obtained should not amend entry point(s).

6.34.5.5. Violations of foreign sovereignty result from unauthorized or improper entry or departure of aircraft. Aircrews should not enter into territorial airspace for which a clearance has not been duly requested and granted through diplomatic channels.

6.34.5.6. Air traffic control agencies are not vested with authority to grant diplomatic clearances for penetration of sovereign airspace where prior clearance is required from the respective country. Aircraft clearances are obtained through diplomatic channels only.

6.34.5.7. In the event air traffic control agencies challenge the validity of a flight routing or attempt to negate existing clearances, pilots must evaluate the circumstances. The normal response will be to attempt to advise the air traffic control agency that the aircraft will continue to planned destination as cleared in international airspace. The key phrase is "in international airspace." Safety of flight is paramount in determining mission continuation. Under no circumstances should aircrews construe a clearance which routes their mission over sovereign airspace which was not approved through diplomatic channels prior to mission departure, as being valid authorization.

6.34.5.8. Aircrews operating missions requiring unique or specially developed routing will normally be briefed at home station, onload station, and/or by the last C2 facility transited prior to performing the critical portion of the mission.

6.34.5.9. Aircrews (except on weather reconnaissance missions) normally are not tasked to and should not fly "due regard" routing unless specifically directed in the mission FRAG or coordinated with proper authorities. The "due regard" or "operational" option obligates the military aircraft commander to be their own air traffic control agency and separate their aircraft from all other air traffic. If operational requirements dictate, ACs may exercise the "due regard" option to protect their aircraft. When the threat has terminated, the aircraft will return to normal Air Traffic Services. Refer to FLIP GP for guidance on due regard.

6.34.6. Altitude Reservations. Aircraft commanders will ensure ALTRV approval is received prior to mission execution. Aircrews needing to check the status of their ALTRV may contact 89 OG/OGO.

6.34.6.1. ALTRVs usually include a 1 hour AVANA (ALTRV Approval Void if Aircraft Not Airborne) to account for delays. If a mission delays more than 1 hour, coordination with the appropriate central altitude reservation facility will be required. It may be possible to extend the AVANA time. If not, a new ALTRV will be required. Begin coordination as soon as the delay is known.

6.34.6.2. Requests for ALTRVs do not eliminate the responsibility to obtain diplomatic clearance or file flight plans. The complete route of flight must be included in DD Form 1801 (DoD International Flight Plan), DD Form 175 (Military Flight Plan), or other equivalent host nation flight plan.

6.35. Navigational Aid Capability.

6.35.1. North Atlantic minimum navigation performance specification (MNPS) airspace and US West Coast and Hawaii route system procedures are as follows:

6.35.1.1. Minimum navigation performance specification (NMPS) standards (FLIP AP/2) are mandatory.

6.35.1.2. Aircraft that lose one INS prior to airspace entry will comply with FLIP AP/2.

6.35.1.3. Aircraft that lose all INS capability prior to designated airspace entry may continue if the crew re-files outside MNPS airspace or outside the Hawaii-Mainland United States composite route structure and NAVAIDs (or navigator) are available to maintain proper navigation tolerances.

6.35.2. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. Refer to FLIP AP/2 and the following for RVSM requirements:

6.35.2.1. Document (in the aircraft forms) malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances.

6.35.3. Basic Area Navigation (BRNAV) Airspace. Airspace where BRNAV is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. BRNAV navigation accuracy criteria is RNP-5. Aircraft with integrated GPS have no BRNAV restrictions. Without GPS, aircraft must auto update every two hours (as required) to maintain actual centerline within +/- 5 NM of ATC cleared route.

6.35.3.1. Minimum equipment to operate in BRNAV airspace is one INS capable of updates or an FAA approved GPS with RAIM or equivalent system. Flights entering BRNAV airspace after long overwater flight must be especially aware of BRNAV tolerances and update accordingly.

6.35.3.2. Aircraft unable to maintain BRNAV tolerances must advise ATC immediately and take appropriate coordinated action.

6.35.3.3. Document (in the aircraft forms) malfunctions or failures of BRNAV required equipment, including the failure of this equipment to meet BRNAV tolerances.

6.35.4. Required Navigation Performance (RNP) Airspace. Airspace where RNP is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. RNP airspace is being incorporated around the world to increase air traffic capacity by decreasing separation requirements between routes. 89 AW aircraft are approved for RNP, but limited to operational time restrictions based on navigation equipment. These limitations will be annotated in **Chapter 10** and updated when appropriate.

6.35.4.1. RNP-10. Compliance includes navigation accuracy within 10NM of actual position 95% of the time. Aircraft not possessing integrated GPS with receiver autonomous integrity mon-

itoring (RAIM), or equivalent system, are limited in how long they may operate in RNP-10 airspace The following are RNP-10 requirements:

6.35.4.1.1. To increase the 6.2 hour baseline, data collection on long overwater legs must still be collected and sent to to HQ AMC/XPY to submit the request.

6.35.4.1.2. Without integrated GPS or an extended baseline, NOPAC will require TACAN updates to be RNP-10 compliant. Shemya AB TACAN must be operational. When abeam Shemya AB a position crosscheck will be made. If inertial position is more than 3 NM from TACAN fix position, a TACAN mix must be accomplished on all inertial units exceeding this limit.

6.35.4.1.3. Flight Planning. Verify aircraft is approved for RNP operation, access mission impact and verify the letter "R" is annotated in block 10 of the DD Form 1801.

6.35.4.1.4. Preflight Procedures. Review maintenance logs to ascertain status of RNP-10 equipment and particular attention should be paid to navigation antennas and the condition of the fuselage skin in the vicinity of these antennas.

6.35.4.1.5. Enroute. At least two long range navigation systems certified for RNP-10 must be operational at the oceanic entry point. Periodic crosschecks will be accomplished to identify navigation errors and prevent inadvertent deviation from ATC cleared routes. Advise ATC of the deterioration or failure of navigation equipment below navigation performance requirements and coordinate appropriate actions.

6.35.4.1.6. Document (in the aircraft forms) malfunctions or failures of RNP required equipment, including the failure of this equipment to meet RNP tolerances.

6.36. CIRVIS and Other Reports. Report all vital intelligence sightings from aircraft as indicated in FLIP planning or FLIP En route Supplement.

6.36.1. In-Flight harassment or hostile action against 89 AW aircraft. Aircraft subjected to harassment or hostile action by foreign aircraft will immediately contact the nearest US Air Force air and ground voice facility and report the encounter. Include aircraft nationality, type, insignia, or any other identifying features; note position, heading, time, speed when harassed, and the type of harassment. Request relay of the report to the nearest C2 CENTER. Also attempt to contact the nearest command post when in UHF and VHF range.

6.36.2. Other incidents will be reported as indicated in JCS Pub 6, Volume 5, and AFM 10-206, *Operational Reporting.*

6.37. Communications.

6.37.1. HF Communications. Confine message traffic to essential operational matters. Perform an HF radio ground check prior to takeoff when the use of HF radio may be required for ATC or C2 communications. Establish HF contact before going out of UHF and VHF range. If unable to establish HF contact with the controlling HF station and an alternate means of relay of ATC information in oceanic areas is not available, return to the nearest suitable support base.

6.37.2. General. Provide ARTCC position and weather observations when required. If unable to contact an ATC agency, attempt relay through the GLOBAL HF stations.

6.37.3. AF Form 72, *Air Report (AIREP)*. When directed by departing weather facility, take and record an AIREP at each position report over a Category I Route. Identify inaccurate CFP winds by special report if the average wind for a route segment exceeds either 30 degrees error in wind direction or 25 knots in wind speed. Turn in completed AF Form 72 to the destination USAF weather facility.

6.37.4. SELCAL code assignments: 89 AW SELCAL codes assigned are as follows:

Table 6.7. SELCAL.

VC-25A		C-137		C-32		C-20	
28000	AKFP			80001	MSER	20375	JSCP
29000	AEMP	27000	AEHP	80002	MSFG	60201	AFGP
		56973	AELP	90003	MSFL	60202	AFHP
				90004	MSFP	60203	AFJP
				C-37		60204	AFKP
				70400	PSMQ	60206	AFMP
				70401	PSMR	00300	DFBS

6.38. In-Flight Emergency Procedures. Report deviations from directives that may occur as a result of an emergency in accordance with AFI 11-202 Volume 3 and this instruction.

6.38.1. Notification of Controlling Agencies. When practical after completing the aircraft emergency action checklists and associated actions crews should furnish the controlling agency and appropriate C2 CENTER a description of the difficulty, assistance required, intentions, and any other pertinent information.

6.38.2. A CONFERENCE SKYHOOK may be initiated when additional expertise is necessary to cope with emergencies or other conditions. Communications procedures are as follow:

6.38.2.1. Provide the following information when time permits.

6.38.2.1.1. Narrative description of the situation to include actions taken by the crew and the intentions of the aircraft commander.

6.38.2.1.2. Fuel on board and hours of endurance.

6.38.2.1.3. Position.

6.38.2.1.4. Altitude and flight conditions.

6.38.2.1.5. Number of personnel and distinguished visitors (DV) on board.

6.38.2.1.6. Qualification of aircraft commander.

6.38.2.1.7. Planned landing base.

6.38.2.1.8. ETA at landing base.

6.39. Need for Medical Assistance. When a person aboard the aircraft requires medical care, inform the station of intended landing in sufficient time so the aircraft may be met by medical personnel. Include the sex, approximate age, and the major complaint in the request.

6.40. Weather Forecasts.

6.40.1. It is the pilot's responsibility to obtain destination weather prior to descent.

6.40.2. The primary means is any US Air Force base weather station via pilot-to-meteorologist service (PMSV) or through a US Air Force aeronautical station. Check on the latest weather prior to descent or landing.

6.40.3. For aircraft flying in EUCOM AOR (ENAME operations) contact USAFE/OWS at Sembach AB GE (DSN 314-496-6145). SOUTHCOM AOR contact 25 OWS at Davis-Monthan AFB, AZ (DSN 228-1977).

6.40.4. The ATC system can provide weather information to en route aircraft.

6.40.4.1. The ARTCCs have a limited capability to provide weather information to en route aircraft within CONUS.

6.40.4.2. SIGMET (significant meteorological information) advisories will be transmitted from the servicing ATC unit. Crews will consider all SIGMETs valid for their aircraft until verified as not applicable with a military METRO service.

6.41. Diversions. Notify the airfield selected for an emergency diversion as soon as possible to allow maximum time to prepare the required assistance or services. The Andrews Command Post will assist the AC as necessary in notifying the appropriate agencies.

6.41.1. Overflying Scheduled Refueling Stops. Before offering to overfly scheduled refueling stops, the aircraft commander must consider all consequences that may arise. As a minimum, coordination with the contact, final arrival airport, overflight windows and greeting parties must be considered. Optimally the option of overflying refueling stops should be coordinated with the contact and CVAM through Current Operations prior to departing home station.

Section 6F—Arrival

6.42. Descent. Prior to descent into unfamiliar areas, appropriate terrain charts (Operational Navigation Chart (ONC), Sectional Aeronautical Chart, Tactical Pilotage Chart (TPC), or Joint Operations Graphic (JOG)) should be reviewed to increase aircrew situational awareness of obstructions. Primary crew members will not be involved in duties other than aircraft operations, descent and approach monitoring, and required checklist items from the initial descent point to landing.

6.42.1. Night and Marginal Weather Operations. Fly a precision approach, if available, at night or during marginal weather. If a precision approach is not available, fly any available approved instrument approach. During night VFR conditions, if an approved instrument approach is not available, a visual approach may be flown as long as the intended runway has some type of visual glide slope indicator (VASI, PAPI, etc.). On training and evaluation flights at familiar fields, pilots may fly non-precision approaches or VFR traffic patterns to accomplish required training and evaluations. The night

training VFR traffic pattern at a familiar airfield does not require the use of a visual glide slope indicating system. The pilot not flying the approach will monitor a precision approach when practical to enhance safety.

6.43. Instrument Approach Procedures.

6.43.1. Prior to starting an instrument approach or beginning an en route descent, pilots will confirm that existing weather is reported to be at or above required minimums for the lowest compatible approach. Pilots shall increase the published visibility minimums of an instrument approach by ½ SM or as noted in NOTAMs, on ATIS, or on the approach plate, when the runway approach lighting system (ALS) is inoperative.

6.43.1.1. NOTE. This applies only to the ALS itself, not to VASIs, PAPIs, and other lights that are not a component of the ALS.

6.43.1.2. For a precision approach, the decision height will provide a height above touchdown of 200 ft or higher. For category (CAT) II ILS approaches, use the lowest published radar altitude. For PAR approaches, visibility will be no lower than RVR 2400 (730 meters) or 1/2 mile visibility (800 meters) with no RVR readout available.

6.43.1.3. Circling approach minimums will be as published for the applicable aircraft category. If not published by category, limit circling minimums to an MDA based on a height above airport (HAA) and visibility as indicated below or as published, whichever is higher.

6.43.1.3.1. Category C: 500 feet HAA, 1 1/2-half mile visibility.

6.43.1.3.2. Categories D and E: 600 feet HAA and 2-mile visibility.

6.43.1.3.3. VC-25A: IAW the Operations Manual.

6.43.1.4. NDB Procedures. NDB approaches may be flown in daylight, VFR conditions only. Arrival at any airfield with only an NDB approach (published or available) is limited to day, VFR operations. An NDB may be used at night or in IMC for alignment to a precision final (i.e. procedure turn, holding pattern in lieu of procedure turn, or procedure track to align the aircraft on an inbound course for a precision final approach). Departure from an airfield with only an NDB approach may be accomplished at night or in IMC conditions provided a departure alternate is available which meets the requirements of 6.19.3.

6.43.1.5. Prior to starting an instrument approach, pilots will confirm their aircraft can meet or exceed all climb gradients specified in the missed approach procedure, based on the number of engines operating when the approach is begun. If missed approach climb charts are not available, use the takeoff obstacle clearance charts. If unable to meet required climb gradients, pilots must coordinate alternate missed approach procedures with ATC which will ensure terrain clearance, prior to commencing the approach. If this is not possible, do not attempt the approach.

6.43.1.6. Weather Minimums for Instrument Approaches: Pilots flying DOD or NOAA non-precision approaches or approved, published non DOD/NOAA approaches, may start the approach if the existing weather is at or above both ceiling and visibility minimums for the approach. Pilots flying published DOD or NOAA precision approaches will continue to use criteria in AFI 11-206.

6.43.1.7. Visibility Only: The only instrument approach procedures that may be flown “Visibility Only,” are DOD or NOAA precision approaches. All other approaches (all Jeppesen, all Host

Nation, and DOD/NOAA non-precision) must be flown with the ceiling and visibility at or above published minimums.

6.43.1.8. Weather below minimums: Pilots will not execute an approach if advised prior to starting the en route descent or penetration that the airfield is below landing minimums.

6.43.1.8.1. If a pilot starts the published approach, (as per AFFSA guidance, an en route descent to an approach may be considered a published approach), and subsequently determines the weather is below minimums, the pilot must not deviate from the last ATC clearance until obtaining a new or amended clearance. The pilot may elect to:

6.43.1.8.1.1. Request clearance to a holding fix or alternate, as applicable.

6.43.1.8.1.2. As authorized by AMC, (reference AFI 11-202 Volume 3, Paragraph 6.73.2.2), continue the approach as published to the missed approach point and land, if the aircraft is in a position to make a safe landing and the runway environment is in sight. See AFI 11-202 Volume 3, Paragraph 8.13.2.).

6.43.2. Established on a Segment of the Approach. If established on a segment of the approach or being radar vectored to final approach and the weather is reported or observed to be below approach minimums, the aircraft commander has the option of continuing the approach to the MAP/DH. If deciding to abandon the approach, level off (or descend if a lower altitude is required for the missed approach procedure). Comply with the last assigned clearance until a new or amended clearance is received.

6.43.2.1. Do not continue the approach below minimums unless the aircraft is in a position to make a safe landing and the runway environment is in sight.

6.43.2.2. CAT II/III approaches will not be continued if weather is reported below CAT II/III minimums.

6.43.2.2.1. If the approach is continued, aircraft commanders should plan to have sufficient fuel available to complete the approach and missed approach and proceed to a suitable alternate with normal fuel reserve.

6.43.2.3. The aircraft commander has final responsibility for determining when the destination is below designated minimums and for initiating proper clearance request.

6.43.3. CAT II/III Procedures. The following airfield and aircraft equipment must be operational (see AFMAN 11-217, *Instrument Procedures*).

6.43.3.1. Approach lights.

6.43.3.2. Runway centerline lighting.

6.43.3.3. High intensity runway lights or touchdown zone lights.

6.43.3.4. Approach end transmissometer.

6.43.3.5. ILS FAR field monitor.

6.43.3.6. Sequence flashers.

6.43.3.7. Cat II minimum RVR of 1200.

6.43.3.8. CAT II HAT of 100 feet minimum.

6.43.3.9. CAT IIIA RVR 700.

6.43.3.10. CAT IIIB RVR 300.

6.43.4. Alternate Flight Publications. The following publications are authorized if acceptable DoD FLIP products are not available:

6.43.4.1. United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA).

6.43.4.2. Jeppesen and Host Government Instrument Approaches (with HQ AMC approval). Crews will contact HQ AMC/DOVS for approval prior to flying these approaches. If not HQ AMC approved, these approaches may not be used.

6.44. Classified Equipment and Material.

6.44.1. Equipment. When classified equipment is onboard, ensure aircraft security requirements are met according to **Chapter 7** of this AFI. At bases not under jurisdiction of the Air Force, ensure the aircraft and equipment are protected. AFI 13-401, *Managing the Information Security Program*, provides specific guidance concerning the security of various levels of classified equipment aboard aircraft.

6.44.2. Material. Ensure Communications Security (COMSEC) and other classified materials are turned in at destination and receipts are obtained for COMSEC and classified material. The on-site C2 center will provide temporary storage for COMSEC and other classified materials during en route, turnaround, and crew rest stops. If a storage facility is not available, the aircraft gun storage box or classified safe may be used for material classified up to and including SECRET. Encrypted COMSEC will only be transferred to authorized DoD personnel.

6.44.3. Identification, Friend or Foe (IFF), Selective Identification Feature (SIF). Ground check IFF/SIF prior to takeoff. IFF self-test or radar interrogation will satisfy this requirement. This check is not required on stopover flights if the IFF is operational upon landing unless required by theater directives.

6.44.4. Mode 4. Aircrews will ensure that they have an operable mode 4 when required for mission accomplishment. Aircrews will conduct an operational ground test of the mode 4 (ground test assets permitting) prior to deployment overseas, or as specified in the OPORD or contingency/exercise tasking.

6.44.4.1. Attempt to fix an inoperable mode 4 prior to takeoff. Do not delay takeoff nor cancel a mission for an inoperable mode 4, except when the aircraft will transit an area where safe passage procedures are implemented.

6.44.4.2. Conduct an in-flight check of the mode 4 on all missions departing the CONUS for overseas locations. Aircrews can request the mode 4 interrogation check through NORAD on UHF frequency 364.2.

6.44.4.3. Aircraft with inoperable mode 4 will continue to their intended destinations. Repairs will be accomplished at the first destination where equipment, parts, and maintenance technicians are available. In theaters where safe passage is implemented, aircraft will follow procedures for inoperable mode 4 as directed in the applicable airspace control order or ATO.

6.44.4.4. Ground and in-flight checks of the mode 4, when conducted, are a mandatory maintenance debrief items. Crews will annotate successful and unsuccessful interrogation of the mode 4 on all aircraft forms (AFTO Form 781A).

6.44.4.5. Aircrews will carry COMSEC equipment and documents required to operate the mode 4 on missions when required per paragraph **6.44.4.** Prior to departing for any destination without COMSEC storage facilities, crews will contact their local COMSEC managers for guidance.

6.45. Maintenance. Complete the **AFTO Form 781, AFORMS Flight and Mission Data Report**, after each flight. After landing, crew members debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment, and all installed special equipment as required. Crewmembers are also responsible for documenting cosmetic faults on the aircraft to ensure maintenance is aware of the flaw. See local maintenance debrief policies in **Chapter 10** of this publication.

6.46. Border Clearance.

6.46.1. Normal Operations:

6.46.1.1. The unit dispatching the mission is normally responsible for the border clearance of all aircraft.

6.46.1.2. When staff support is not available, border clearance is the responsibility of the aircraft commander. Duties may be assigned to ground personnel or to other designated crewmembers, but the aircraft commander retains ultimate responsibility. The aircraft commander is responsible for ensuring the following:

6.46.1.2.1. Crew members and passengers possess current passports and valid visas, when required.

6.46.1.2.2. Crew members and passengers have current certificates of immunization (shot record).

6.46.1.2.3. Cargo entry documents are in proper order.

6.46.1.2.4. Departing or entering the United States through an air base where border clearance can be obtained.

6.46.1.2.5. Obtaining border clearance for aircraft cargo, passengers, crew and baggage, if required, before takeoff to a foreign area or after arrival from a foreign area.

6.46.1.2.6. Spraying the aircraft (Foreign Clearance Guide and paragraph 47 of this chapter).

6.46.2. Procedures for US Entry:

6.46.2.1. En route, the F/A or designated crewmember will distribute personal customs declarations to all passengers and crew members. The F/A or designated crewmember will also brief passengers and crew members on customs regulations, and prepare and compile necessary border clearance forms for the aircraft commander's signature.

6.46.2.2. En route, notify the CC agency or airfield contact at the base of intended landing of any change in ETA to ensure that border clearance is accomplished as soon as possible after landing.

6.46.2.3. Obtain a permit to proceed when military necessities require that an aircraft (which has landed in the United States for customs clearance) proceed to another base in the US to obtain bor-

der clearance. The permit to proceed delays customs inspection of cargo, passengers, and crew until arrival at the off-load station and saves intermediate off-loading and reloading normally required for customs inspection. The permit to proceed is valid only to the airport of next landing where the border clearance must be completed or a new permit to proceed issued by a customs official. Do not make intermediate stops between the issue point of the permit to proceed and destination of manifested cargo unless required by an emergency situation or directed by the controlling C2 CENTER.

6.46.2.4. When an aircraft lands for a US border clearance, a US Customs representative normally will meet the aircraft to obtain the required documents. Do not deplane passengers or crew members unless necessary for safety or the preservation of life and property. Do not unload until approved by customs and agriculture personnel or their designated representatives. This procedure applies to the initial landing in the US and all landings required when operating on a permit to proceed or until all crew, passengers, and cargo complete final border clearance.

6.46.3. Inspections of US aircraft by foreign officials:

6.46.3.1. Follow US Air Force policy on status of military aircraft as stated in the Foreign Clearance Guide, General Information, **Chapter 3**. In substance, this policy holds that US military aircraft are immune from searches, seizures, and inspections (including customs and safety inspections) by foreign officials. In addition, aircraft commanders must be aware of and adhere to any specific Foreign Clearance Guide provisions for individual countries.

6.46.3.2. If confronted with a search request by foreign authorities, aircrews should use the following procedures:

6.46.3.2.1. In most cases, search attempts may be halted simply by a statement of the aircraft commander to the foreign official that the aircraft is a sovereign instrumentality not subject to search without consent of US Air Force headquarters or the US Department of State officials in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities who may honestly, but mistakenly, believe they have authority to search US Air Force aircraft.

6.46.3.2.2. If foreign authorities insist on conducting a search, the aircraft commander should make every effort to delay the search until he or she can contact US Air Force headquarters or the appropriate embassy officials. The aircraft commander should then notify these agencies of foreign request by the most expeditious means available and follow their instructions.

6.46.3.2.3. If foreign officials refuse to desist in their search request, pending notification to US Air Force headquarters or the appropriate embassy, the aircraft commander should indicate that he or she would prefer to fly the aircraft elsewhere (provided fuel, flying time, and mechanical considerations permit a safe flight) and request permission to do so.

6.46.3.2.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the aircraft commander should state that he protests the course of action being pursued and that he intends to notify both US Air Force headquarters and the appropriate American embassy of the foreign action. The aircraft commander should not attempt physical resistance, and should thereafter report the incident to US Air Force headquarters and appropriate embassy as soon as possible. The aircraft commander should escort foreign authorities if the inspection cannot be avoided.

6.46.3.3. Other procedures may apply when carrying sensitive cargo or equipment. Follow these procedures and applicable portions of classified Foreign Clearance Guide supplements.

6.47. Insect and Pest Control.

6.47.1. Responsibility. Aircraft commanders will ensure required spraying is accomplished according to AFI 48-104, *Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft, and Other Transports of the Armed Forces (Joint)*, Department of Defense Foreign Clearance Guide, or as directed by higher headquarters. Certify the spraying on **CE Form 7507**, or on forms provided by the country transited. Aircraft should never be sprayed with passengers on-board. The only exception is when the Foreign Clearance Guide mandates it.

6.47.1.1. When spraying is required, use insecticide, aerosol d-phenothrin-2 percent, National Stock Number (NSN) 6840-01-067-6674 (or equivalent), to spray the aircraft. Use the following guidelines:

6.47.1.1.1. Direct the nozzle toward the ceiling of the compartment or space being sprayed.

6.47.1.1.2. Spray spaces inaccessible from within the aircraft after completely loading fuel, baggage, cargo, and passengers, including baggage compartments, wheel wells, and other similar spaces.

6.47.1.1.3. Spray the cabin, cockpit, and other spaces accessible from within the aircraft after the crew is aboard and after closing all doors, windows, hatches, and ventilation openings.

CAUTION. If the insecticide label directs disembarkation after use, spray prior to boarding crew or passengers. Close all doors and hatches for 10 minutes after dispensing and ventilate for 15 minutes before allowing anyone on board.

6.47.1.2. Spray for 3 minutes and 20 seconds unless longer periods are specified for the country being transited. Keep used aerosol cans separate from other trash so they may be disposed of safely.

6.47.1.3. Spraying Times. Spray the aircraft for the following times unless longer periods are specified for the country being transited:

Table 6.8. Spray Times.

MDS Aircraft	C-20/C-37	C-9	C-32	C-137	VC-25A
Spraying Time	15 Sec	37 Sec	65 Sec	65 Sec	118 Sec

6.47.2. Responsibility of Aircraft Commander In-flight. When seeing any insect or rodent infestation of the aircraft in-flight, notify the destination C2 CENTER, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

6.47.3. Procedure at Aerial Port of Disembarkation (APOD). On arrival at an APOD, do not open cargo doors or hatches except to enplane officials required to inspect the aircraft for insect or rodent infestation or to deplane the minimum number of crew members required for block-in duties. Do not on-load or off-load cargo or passengers until the inspection is satisfactorily completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager or the local C2 organization.

Section 6G—Miscellaneous

6.48. Dropped Object Prevention. If a dropped object is discovered, the flight crew will:

6.48.1. Notify the 89 AW Current Operations branch or the controlling agency as soon as practical; include routing, altitude, weather, etc.

6.48.2. Notify maintenance at the next station transited.

6.49. Cockpit Voice Recorder (CVR). If involved in a mishap or incident, after landing and terminating the emergency, open the CVR power circuit breaker.

6.50. Life Support and Dash 21 Equipment Documentation. The aircraft commander or designated representative will:

6.50.1. Prior to departing home station or en route stations, ensure appropriate serviceable protective clothing, life support, survival, and dash 21 equipment for the entire or remainder of the mission are aboard the aircraft.

6.50.2. Prior to departing home station and following en route crew changes, review AF Form 4076, Aircraft Dash 21 Equipment Inventory, to ensure all required dash 21 equipment has been certified as installed by maintenance, the initial check has been signed by maintenance, and configuration documents match mission requirements.

6.50.3. Prior to departing home station and following en route crew changes, review, sign, and date the **AFTO Form 46, Pre-positioned Life Support Equipment**, to ensure all required protective clothing and life support and survival equipment have been certified as installed by aircrew life support and that configuration documents match mission requirements. Ensure appropriate number and type of life preservers are aboard for over-water missions carrying children and infants.

6.50.4. Missing Equipment. Aircrew members discovering equipment missing will accomplish the following:

6.50.4.1. Make an AFTO Form 781 entry for equipment found missing. Additionally, ensure equipment removed from the aircraft at an en route station is documented in the AFTO Form 781.

6.50.4.2. Annotate AF Form 4076 and AFTO Form 46 in the next vacant column indicating the quantity remaining for the item. Ensure the ICAO location designator is entered above the check number of that column.

6.50.4.3. Leave AF Form 4076 and AFTO Form 46 on board the aircraft in the event of an en route crew change.

6.50.4.4. Advise the aircraft commander and determine whether the missing equipment should be recovered or replaced before mission continuation.

6.50.4.5. Assist, as required, in preparing reports of survey for missing equipment.

6.50.4.6. When possible, advise HQ AMC/DOTL (or airport management) before mission continuation.

6.50.5. Additional Equipment. If more equipment is discovered during the preflight than is annotated on the AF Form 4076 and AFTO Form 46, annotate the total quantity in the next vacant column for the item. Ensure the ICAO location designator is entered above the check number of that column.

6.51. Passenger Restrictions. The only passengers on missions transporting DVs will be those of the official party and those space available passengers authorized by the on-board contact officer.

6.51.1. Space Available Passengers. On occasion, a space available seat release may be authorized through HQ USAF/CVAM. This will be noted on the mission setup. ACs are authorized to release space available seats on **non-revenue** mission legs (except White House missions) when no official passengers are aboard (positioning and depositioning legs). ACs are encouraged to release maximum space available seats subject to the following restrictions:

6.51.1.1. Revenue Missions. Space available passengers on **revenue** missions must be approved in advance by USAF/CVAM through 89 OG/OGO. This is essential to assure proper funding and reimbursement.

6.51.1.2. White House Support Missions. Space available passengers will not be permitted aboard White House support mission aircraft without express permission of the White House Military Office through HQ USAF/CVAM. This includes positioning and de-positioning legs. When it is necessary to move 89 AW aircrew members or support personnel on White House support mission aircraft, the White House Military Office will be advised and permission obtained through the 89 AW Current Operations branch.

6.51.1.3. Billing. Space available passengers on **Revenue** or **White House** missions without the approval of the applicable agency may be subject to being billed for commercial first-class airfare for the applicable route, depending on the using agency's policy. If the DV or on-board contact officer releases seats, advise them of this prior to boarding passengers. Attempt to obtain the proper approval.

6.51.1.4. Anti-hijacking Inspections. Board space available passengers only after anti-hijacking inspections are completed. If a space available seat release is anticipated at an en route station, the local passenger service facility will be advised of the inspection requirement. Procedures for anti-hijacking inspections by the aircrew at stations without a military passenger service facility are specified in **Chapter 13**. The AC has final authority for accepting space available passengers.

6.51.2. Passenger Boarding. On all missions operating without security guards, the first F/A will ensure that all passengers are listed on the passenger manifest prior to boarding the aircraft. ***EXCEPTION*:** The flight mechanic will be responsible for checking passengers on the C-20/C-37). Passengers will be greeted and checked at the bottom of the steps. The AC or the mission escort officer must clear any passengers not listed on the manifest prior to entering the aircraft. This task will be completed at the beginning of each mission and any time passengers have to re-board the aircraft.

6.52. Operations at La Paz (J.F. Kennedy Intl) Bolivia. Use the following aircrew procedures for operations at J.F. Kennedy International (elevation 13,355 feet):

6.52.1. Raise cabin altitude to 10,000 feet during the descent. Configure aircraft pressurization, air conditioning, and oxygen/warning systems as required and complete the remaining depressurization on final approach.

6.52.2. A specific timed period of oxygen use prior to landing is not required. Aircrew members use oxygen during descent, approach, landing, takeoff, and ground operations when engines are running/ checklist operations in progress.

6.52.3. ACs briefing and PAX briefings must include cautions on high altitude operations and hypoxia. All passengers are susceptible to hypoxia during depressurized flight above 10,000 feet cabin altitude. Administer oxygen to any passenger displaying hypoxia symptoms. Do not, repeat, do not land pressurized.

6.52.4. Take your time during ground operations at high altitude. Monitor and back up other crew members servicing or loading the aircraft. Keep portable oxygen bottles readily available in the event of over-exertion or hypoxia.

6.53. No Show Passenger Baggage. No-show passenger baggage or baggage of passengers removed from flight will be downloaded prior to departure.

6.54. Airfield Data Information. Aircrews transiting strange airfields or airfields where conditions may adversely affect subsequent flight will:

6.54.1. Report airfield characteristics that produce illusions, such as runway length, width, slope, and lighting, as compared to standard runways, sloping approach terrain, runway contrast against surrounding terrain, haze, glare, etc.

6.54.2. Debrief the next C2 CENTER transited.

6.55. Impoundment of Aircraft. If an aircraft is involved in a serious in-flight incident, the aircraft commander should impound the aircraft immediately after landing and contact the controlling C2 CENTER for further instructions.

Chapter 7

AIRCRAFT SECURITY

7.1. General. Your mission places you and your aircraft in an environment highly vulnerable to security threats. The importance of the DVs transported and the high frequency of missions into civil airports throughout the world magnifies this vulnerability. Positive security measures are required at all times. This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of 89 AW aircraft. AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*, AFI 31-101, volume 1, *Air Force Physical Security Program*, and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public.

7.2. Security. Comply with volumes of AFI 31-101 for protection requirements. Higher headquarters or the 89 OG/CC may direct the use of security personnel above and beyond the requirements of AFI 31-101.

7.2.1. Presidential Aircraft. All presidential aircraft are priority A resources. Presidential aircraft required continuous security protection at home station, en route operating locations and contract maintenance facilities. See **Chapter 10** for local security personnel procedures.

7.2.2. SDSAM Aircraft. All SDSAM aircraft are priority A resources. . SDSAM aircraft are designated as such by HQ USAF/CVAM. See **Chapter 10** for local security personnel procedures.

7.2.3. SAM Aircraft. When not designated as SDSAM or Presidential aircraft, C-137, C-32 and C-9 aircraft will be designated priority B resources. All other 89 AW aircraft will be designated priority C resources. See **Chapter 10** for local security procedures for priority B and C aircraft.

7.2.4. SENEX Mission Aircraft. SENEX aircraft are priority A resources at all times, regardless of operational status or location. They may be used as backup or substitute for "Air Force One" missions.

7.3. Air Force Physical Security Program. The following security procedures will implement AFI 31-101, *The Air Force Physical Security Program*, requirements for 89 AW aircraft:

7.3.1. AC Authority. The AC will ensure that adequate aircraft security is provided at all times.

7.3.2. Advance Security Support Arrangements. The AC will coordinate security support at en route stations in advance to ensure its availability. Andrews Command Post will assist the AC for alert missions or en route diversions.

7.3.3. Briefings. When required, ACs will obtain threat assessment and security capability evaluation briefings before departing home station. Andrews Command Post will provide the AC with pertinent updates en route.

7.3.4. Baggage Security. Baggage not certified safe for loading by a responsible government agency will be inspected prior to loading at the AC's discretion. Verify baggage identification against passenger manifest. Aircrew members will secure their own baggage. The aircraft commander is responsible for explaining baggage security requirements to the mission contact.

7.3.4.1. On Presidential and SDSAM aircraft, all passenger baggage will be inspected prior to loading. An ASNCO will verify baggage identification against the passenger manifest.

7.3.5. Fuel Security:

7.3.5.1. Fuel for Presidential aircraft must pass a laboratory analysis and be secured until used. The US Air force advance agent will obtain and secure this fuel.

7.3.5.2. SDSAM and other aircraft do not require secured fuel. Use fuel obtained from large capacity, high use sources not pre-designated for special air mission aircraft.

7.3.6. Flight Line Photography. There are no restrictions on exterior photography of 89 AW aircraft. Interior photography is also allowed with the exception of the VC-25A and enroute aircraft. Interior photos of the VC-25A must be coordinated with the White House Military Office through the Presidential Pilots' Office. Interior photos of enroute 89 AW aircraft are at the discretion of the aircraft commander and the principle DV. Care must be taken to remove all classified materials from sight prior to authorizing any photography.

7.4. En Route Security.

7.4.1. Aircraft Access Control. Positive control of access to 89 AW aircraft is mandatory.

7.4.1.1. ASNCOs control access to presidential, SENEX, and SDSAM aircraft and will accompany these aircraft on missions. When directed by the 89 OG/CC, ASNCOs control access to SAM aircraft. They will positively identify all individuals granted unescorted entry to the aircraft.

7.4.1.2. When ASNCOs do not accompany SAM aircraft, the aircrew is responsible for controlling access. At USAF installations, a passenger service representative normally assists in boarding passengers. The passenger service representative should be at the aircraft prior to passenger arrival and remain at the aircraft until loading is complete Monitor all servicing and support personnel. Do not allow unidentified personnel onboard or around the aircraft. Escort unofficial visitors on board the aircraft and keep them under surveillance until they depart.

7.4.2. Use of Aircraft Sealing Devices. Except for Presidential, SENEX, and SDSAM aircraft protected by an aircrew ASNCO, 89 AW aircraft will be sealed during all RONs and during any ground time when aircrew is absent from the aircraft. Seal doors and hatches according to 89 AW directives. Aircraft with an onboard ground security system meet the intent of this paragraph.

7.4.3. Refer to **Chapter 15** of this AFI for specific ASNCO procedures.

7.4.4. When used, the PHEONIX RAVEN team will consist of two or more US Air Force security force members depending on security requirements. The team travels as special passenger MEGP status and is responsible to the aircraft commander at all times. In turn, aircraft commanders are responsible for their welfare (transportation, lodging, etc.). Aircraft commanders will ensure security team members receive a mission briefing, aircraft egress/passenger briefing (as appropriate) See **Chapter 10** for specific PHOENIX RAVEN and SECURE LAUNCH procedures.

7.5. Detecting Unauthorized Entry.

7.5.1. Suspected Unauthorized Entry. If the AC suspects aircraft has been tampered with or subjected to unauthorized entry, take the following actions:

7.5.1.1. Notify the local security authorities and request a thorough inspection of the aircraft for sabotage, explosive devices, and pilferage.

7.5.1.2. Notify Andrews Command Post. Advise them of any requirements for assistance, and give them your estimate of a revised departure time.

7.5.1.3. If there are indications that sabotage is a definite possibility or if security inspections may delay the DV party, notify the mission contact officer. Establish suitable departure time. If necessary, coordinate suitable alternate transportation through 89 OG/OGO.

7.5.1.4. Monitor the security check of the aircraft. When cleared by security authorities, conduct thorough preflight inspection. Look for broken wiring, damaged components, foreign devices, etc.

7.5.1.5. If both the security authorities and the AC are assured aircraft is safe to fly, notify the 89 OG/CC. Depart only with the 89 OG/CC approval. ***EXCEPTION*:** Presidential missions may depart with Presidential Pilot approval. Safety and aircraft security take priority over minimizing DV inconvenience.

7.5.2. Security awareness is crucial to effective mission accomplishment. Aircrews must always remain vigilant to their surroundings, especially at high threat, low security locations. During preflight activities, aircrews will inspect all accessible areas, to include aircraft wheel wells, and all cargo compartments of the aircraft for unauthorized packages, personnel, or other unfamiliar devices. Report any suspicious items to host security forces. Aircrews will maintain a heightened security posture throughout all pre-takeoff activities.

7.6. Preventing and Resisting Hijacking.

7.6.1. General Hijacking Guidance. A hijacking could create a serious international incident and jeopardize the safety of passengers and crew. High level DVs traveling aboard 89 AW aircraft increase potential severity of any hijacking incident. You can expect the National Military Command Center (NMCC) to become involved in resolving 89 AW hijack crises. Andrews Command Post is central point of contact if a hijacking threatens your aircraft at any location. When possible, maintain constant contact with Andrews Command Post to take advantage of their resources. The AC is the coordinating authority for anti-hijacking procedures. The AC has first-hand knowledge of the situation and must take every opportunity to keep command authorities apprised of the situation. 89 AW CSS and NMCC will relay instructions to the AC through the Andrews Command Post.

7.6.2. The Air Transportation Act of 1974 and the Federal Aviation Act of 1958, as amended, vest the FAA Administrator with exclusive responsibility for the direction of law enforcement activity in aircraft hijacking situations involving all aircraft (civil and military) in-flight in the United States.

7.6.3. In taking action during an aircraft hijacking situation, military forces will act under military command within the scope of their duties.

7.6.4. In the event an aircraft involved in an aircraft hijacking situation is carrying documents, equipment, or material that DoD has determined to be highly sensitive, or weapons of mass destruction, DoD will provide FAA, and where appropriate, the FBI, with all pertinent information. Where possible, the FAA will consult and cooperate with DoD prior to directing any law enforcement activity.

7.6.5. An aircraft is most vulnerable to hijacking when the aircrew is aboard and the aircraft is operationally ready for flight.

7.6.6. A concerted effort must be made to prevent the hijacking of military or military contract aircraft by detecting potential hijackers before they board the aircraft.

7.6.7. Should preventive efforts fail, any actual attempt to hijack a military aircraft must be resisted in a manner appropriate to the situation. Resistance may vary from dissuasion to direct confrontation, including the use of weapons. ASNCOs are authorized to use weapons to subdue a hijacker.

7.6.8. Since air piracy may be committed by political terrorists or by individuals to whom the threat of death is not a deterrent but a stimulus, ordinary law enforcement procedures may be ineffective. Thus, successful conclusion of a hijacking situation and apprehension of the hijackers may require use of specialized law enforcement techniques and procedures.

7.6.9. Delaying actions have been most successful in overcoming hijackings without loss of life or property.

7.6.10. In the case of an aircraft carrying passengers, the primary concern is the safety of the passengers.

7.6.11. Assistance to hijacked civil or military contract aircraft will be rendered as requested by the pilot in command of the aircraft and the authority exercising operational control of the anti-hijacking effort.

7.7. Preventive Measures. Commanders at all levels must ensure preventive measures are taken to minimize access to the aircraft by potential hijackers. When a 89 AW aircraft is operating away from home station, the aircraft commander will ensure provisions of this chapter and AFI 13-207, as supplemented, are complied with.

7.7.1. Preventive measures include the following: The host station passenger processing or manifesting facility should conduct anti-hijacking inspections. Do not board passengers until the aircraft commander is fully satisfied with inspection results. In the absence of qualified passenger service representatives, the aircraft commander will ensure the anti-hijacking inspection of passengers and baggage is accomplished.

7.7.2. Medical facility commanders are responsible for anti-hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections prior to loading.

7.7.3. During exercises or contingencies in support of combat operations involving the movement of large groups of personnel, the unit being supported should manifest passengers and perform anti-hijacking inspections.

7.7.4. Passengers will not carry weapons or ammunition on their person or in hand-carried baggage aboard an aircraft except special agents, guards of the Secret Service or State Department, and other individuals specifically authorized to carry weapons.

7.7.5. If weapons must be cleared, ask the individual to:

7.7.5.1. Move to a safe, clear area at least 50 feet from any aircraft, equipment, or personnel before unholstering or unslinging their weapons.

7.7.5.2. Clear weapons in accordance with standard safety procedures.

7.8. Initial Response. When an act of air piracy involves an Air Force installation or aircraft within the United States, response will be according to the following guidelines until such time as FAA assumes active direction of anti-hijacking efforts. Resist all attempts to hijack a military aircraft. Resistance may

vary from simple discussion through deception and subterfuge, to direct physical confrontation, including the prudent use of weapons.

7.8.1. To counter a hijacking, actual or threatened, delay movement of the aircraft to provide time for ground personnel and the aircrew to establish communication and execute coordinated resistance actions.

7.9. In-Flight Resistance. After airborne, success in thwarting a hijacking depends on the resourcefulness of the aircrew. Many variables of a hijacking preclude use of any specific counter-hijacking procedure. Some key factors should be evaluated before deciding a course of action to be taken, including the nature of the threat, danger to life or crippling damage to the aircraft in-flight, destination indicated by the hijacker, and the presence of sensitive material onboard. Some counter-hijacking actions the aircrew may consider are:

7.9.1. Engage the hijackers in conversation to calm him or her and to evaluate what course of action might be effective.

7.9.2. Dissuade the hijacker.

7.9.3. Use facts or subterfuge to convince the hijacker intermediate stops are necessary.

7.9.4. Propose more favorable alternatives, such as landing in a neutral, rather than a hostile, country.

7.9.5. Exploit any reasonable opportunity to incapacitate or overcome the hijacker physically, including the prudent use of firearms.

7.10. Communications Between Aircrew and Ground Agencies. Crews facing a hijacking threat will notify ground agencies by any means available as soon as practical and follow-up with situation reports as circumstances permit.

7.10.1. If possible, transmit an in-the-clear notification of hijacking to ATC. Controllers will assign IFF code 7500 (does not preclude subsequent selection of code 7700).

7.10.2. If in-the-clear transmissions are not possible, report "am being hijacked" by setting transponder to code 7500. If unable to change transponder code, or when not under radar control, transmit a radio message to include the phrase "(call sign) transponder seven five zero zero."

7.10.3. Controllers will acknowledge receipt and understanding of transponder code 7500 by transmitting "(call sign) (facility name) verify squawking 7500." An affirmative reply or lack of reply from the pilot indicates confirmation and proper authorities are notified.

7.10.4. To report "situation appears desperate; want armed intervention," after code 7500 is used, change to code 7700. If unable to change transponder code to 7700, or when not under radar control, transmit "(aircraft call sign) transponder seven seven zero zero."

7.10.4.1. When changing from code 7500 to code 7700, remain on 7500 for at least 3 minutes or until a confirmation of code 7500 is received from ATC, whichever is sooner, before changing to code 7700. ATC acknowledges code 7700 by transmitting "(call sign) (facility name) now reading you on transponder seven seven zero zero."

7.10.4.2. Aircraft squawking 7700 after squawking 7500, which are not in radio contact with ATC, are considered by ATC to have an in-flight emergency (in addition to hijacking), and the

appropriate emergency procedures are followed. Notification of authorities in this case includes information that the aircraft displayed the hijack code as well as the emergency code.

7.10.5. To report "situation still desperate, want armed intervention and aircraft immobilized", leave flaps and slats full down after landing, or lower full flaps while on the ground. To facilitate message distribution, transmit "(aircraft call sign) flaps are full down."

7.10.6. To report "leave alone, do not intervene," retract the flaps/slats after landing. Pilots who retract flaps and slats after squawking 7700 should return to code 7500 and remain on code 7500 for the next leg of the hijacked flight unless the situation changes. Transmit "(call sign) back on seven five zero zero" to emphasize the fact intervention is no longer desired.

7.11. Forced Penetration of Unfriendly Airspace. These procedures are designed to deter possible hostile action against the hijacked aircraft that has been forced to penetrate airspace of a nation unfriendly to the United States.

7.11.1. If instructions from the unfriendly nation are received either by radio contact or by air intercept before boundary crossing, comply with instructions received.

7.11.2. If no contact with unfriendly nation is made before approaching a boundary:

7.11.2.1. Maintain TAS not more than 400 knots.

7.11.2.2. Maintain an altitude between 10,000 and 25,000 feet if possible.

7.11.2.3. Fly a direct course toward destination announced by the hijacker, if no course is specified.

7.11.2.4. Transmit the international distress signal, MAYDAY, on any of the international distress frequencies (121.5 MHz, 243.0 MHz, or 2182 KHz) in an effort to establish communications.

7.11.2.5. Set mode 3 code 7700 on transponder.

7.11.2.6. If radio contact cannot be established, follow procedures set forth in FLIP.

7.11.3. Consider the presence of classified documents and equipment aboard the aircraft. When a landing in an unfriendly nation is imminent, attempt to dispose of or destroy the equipment or material.

7.12. Arming of Crewmembers. Aircrews will be armed on all overseas missions unless ASNCOs are a part of the crew. C-137 engineers will be armed; C-32, C-9, C-37 and C-20 flight mechanics/crew chiefs will be armed. All crewmembers should know who is armed. Arm aircrews on US missions only when directed by the 89 OG/OGO. Unit commanders will ensure that crewmembers are familiar with weapon issue, loading, transfer, and receipt procedures. Comply with AFI 31-207, *Arming and Use of Force by Air Force Personnel.* If an armed crew member must leave the crew en route, transfer the weapon to another authorized crew member using AF Form 1297, **Temporary Issue Receipt**.

7.12.1. Standby/Alert Launches. Do not delay the mission to pick-up weapons. If it appears there will be an unacceptable wait to get weapons, proceed to the aircraft and notify the command post.

7.12.2. Crew Rest. When crew must RON, secure weapons in the aircraft gun box with approved lock. Do not use local armories.

7.12.3. Wearing of Weapons. Wear weapons in holster, concealed at all times to prevent identifying armed crewmembers. Do not wear weapons off the flightline except to and from the C2 CENTER, armories and other facilities associated with aircrew activities. When overseas, wearing weapons outside the aircraft is discouraged. Keep armed crewmembers inside the aircraft.

7.12.4. Weapons Storage In-flight. Crewmembers will be armed before preflight, onload, or offload duties and until completion of all offload duties. When no passengers are onboard, weapons may be stored in the gun box in-flight after a satisfactory stowaway check. Crewmembers will rearm before landing. Weapons need not be unloaded before placing them in a gun box.

7.12.5. Crewmembers will ensure they are reissued the same weapon until mission termination at home station.

7.12.6. Loading and Transfer of Weapons. Load and unload weapons at approved clearing barrels if available. Do not use a hand-to-hand transfer of loaded weapons to another crew member; place the weapon on a flat surface.

7.13. Force Protection. Crews must be alert to the possibility of terrorist activities at all times. The following considerations may help crew members avoid becoming victims of terrorism when operating in overseas locations:

7.13.1. Personal Conduct. Crews must realize their conduct can make them a target for individuals dissatisfied with US foreign involvement in their national affairs. Local foreign nationals may or may not condone a military presence - crew conduct will be watched and judged. Therefore, utilize the following:

7.13.1.1. Maintain good military bearing both on and off duty.

7.13.1.2. Avoid dressing in clothes that highlight the fact you are an American, i.e. cowboy hats, wide belt buckles, shirts with pro-American slogans, etc.

7.13.1.3. Do not wear clothing displaying profanity.

7.13.1.4. Know where “off limits” areas are and avoid them.

7.13.1.5. When possible, travel in groups of two or more.

7.13.1.6. Avoid demonstrations for any cause.

7.13.1.7. Avoid discussion of politics.

7.13.1.8. Avoid using ranks or titles in public places.

7.13.2. Ground transportation security. When traveling to and from billeting, messing facilities, etc. consider the following to minimize drawing attention to yourself as a potential target:

7.13.2.1. If possible, consider not using a car that announces Government ownership.

7.13.2.2. Park in well-lighted areas.

7.13.2.3. Always lock your car. If possible, do not leave it on the street overnight.

7.13.2.4. Avoid isolated roads and dark alleys.

7.13.3. Personal Identification. Consider the following actions to avoid advertising the fact you are an American:

7.13.3.1. Avoid military style luggage such as B-4 bags and duffel bags with military logos, etc.

7.13.3.2. Consider placing your official passport and related documents such as military ID, flight orders, dog tags in your hand-carried luggage and not in your wallet or purse.

7.13.3.3. Wear conservative styled civilian clothing when using commercial transportation.

7.13.4. Hotel Security. When billeted in commercial hotels, crews need to be aware of the following:

7.13.4.1. If possible, obtain rooms between the second and sixth floors.

7.13.4.2. Always lock interior locks when occupying rooms.

7.13.4.3. Always assume your room is monitored and avoid viewing or discussing classified material.

7.13.4.4. Sanitized crew lists with names only should be used to record room numbers.

7.13.4.5. At no time should the crew orders be given to hotel registration clerks.

7.13.4.6. Orders, itineraries, or other mission related materials should not be left in clear view in hotel rooms.

7.13.4.7. Luggage tags and hotel registration forms should reflect addresses other than Andrews AFB.

7.14. Protecting Classified Material on Aircraft. The aircraft commander is responsible for protection of classified materials aboard their aircraft. Se requirements in AFI 31-401 *Information Security Program Management.* As a minimum, ensure the IFF equipment is set to zero before leaving the aircraft.

Chapter 8

OPERATIONAL REPORTS AND FORMS

8.1. General. Applicable reports and forms are contained in this chapter.

8.2. AF Form 457, USAF Hazard Report. See AFI 91-202, *The US Air Force Mishap Prevention Program*).

8.2.1. The Air Force hazard reporting system provides a means for Air Force personnel to alert supervisors and commanders to hazardous conditions requiring prompt corrective action.

8.2.2. Special Procedures for Hazard Reports Concerning Weather. Complete the front of an **AF Form 457** and address it to the parent wing flying safety office. If a computer flight plan deficiency is involved, attach one copy of **the** AF Form 72**, Air Report (AIREP)** or AMC Form 25, **Flight Plan and Record**, or AF Form 4095 (*Formerly* AMC Form 488), **INS Flight Plan and Log**, and the computer flight plan (CFP) to the report. Send the report so that the parent unit receives it within 5 days.

8.3. RCS: HAF-SE(AR)7602, Hazardous Air Traffic Report (HATR), (AFI 91-202).

8.3.1. The Air Force HATR program provides a means for personnel to report all near midair collisions and alleged hazardous air traffic conditions.

8.3.2. Procedures.

8.3.2.1. Make an airborne report of the hazardous condition to the nearest air traffic control agency (e.g. center, FSS, control tower, or aeronautical radio station), and give the following information as appropriate:

8.3.2.1.1. Call sign.

8.3.2.1.2. Time and place (radial/DME of NAVAID, position relative to the airfield, etc.) of the occurrence.

8.3.2.1.3. Altitude or flight level.

8.3.2.1.4. Description of the other aircraft.

8.3.2.1.5. Statement that a written HATR report will be filed upon landing.

8.3.2.1.5.1. NOTE: FAA must know if an official report is being filed.

8.3.2.2. File the HATR as soon as possible (within 24 hours) using any available means of communication. Normally, it should be filed at the Air Force base operations office at the landing airport. If this is impractical and if communications permit, notify the safety office of the Air Force base where the condition occurred, the safety office at the home base, or as prescribed by the overseas major command. In any case, provide the base or wing safety office with all available information needed to prepare AF Form 651. Turn in a completed copy of AF Form 651 to the wing safety office.

8.3.3. Individuals who submit HATRs on incidents are granted immunity from disciplinary action provided:

8.3.3.1. Violation was inadvertent, i.e. not deliberate.

8.3.3.2. No mishap occurred.

8.3.3.3. No criminal offense was intended or committed.

8.3.3.4. The individual reported the incident according to paragraph **3.2.**

8.4. AF Form 7115, USAF Aircraft Mishap Report Worksheet (Aircraft and Personnel Mishaps).

8.4.1. Responsibilities. Notify the appropriate authorities of any mishap involving aircraft or crew.

8.4.2. Reportable Mishaps. Report damage to the aircraft or injury to the crew or passengers. Also, any damage or injury to another organization's equipment or personnel resulting from the movements or actions of an AMC aircraft or crew. Reportable mishaps include:

8.4.2.1. Physiological Mishaps.

8.4.2.2. Engine flameout, failure, or required shutdown, after engine start with intent for flight, regardless of damage. Report incidents involving two or more engines immediately. Single-engine incidents may be reported upon landing.

NOTE:

Intentional shutdowns for training, FCF, or other non-emergency purposes are excluded; however, report failure to restart, using the criteria above.

8.4.2.3. Loss of thrust sufficient to preclude maintaining level flight at a safe altitude.

8.4.2.4. Engine case penetration by shrapnel from internal engine component failure.

8.4.2.5. Engine case rupture or burn-through, engine bay fire, or massive fuel leakage.

8.4.2.6. Inadvertent thrust reversal.

8.4.2.7. Flight control malfunction (including AFCS and trim systems) resulting in an unexpected, hazardous change of flight attitude, altitude, or heading. When making the AFTO 781A, **Maintenance Discrepancy and Work Document**, entry, include the flag words "reportable flight control malfunction."

8.4.2.8. Malfunction of landing gear when difficulty is experienced using emergency system or procedures.

8.4.2.9. Cargo door or ramp malfunction when intent for flight exists which could affect the integrity of the system.

8.4.2.10. In-flight loss of all pitot-static instrument indications or all gyro-stabilized attitude or directional indications.

8.4.2.11. Spillage or leakage of radioactive, toxic, corrosive, or flammable material from aircraft stores or cargo that, in the judgment of the reporting individual, is significant hazard to the crew, passengers, or aircraft.

8.4.2.12. Human factors related situation, e.g. misinterpretation of instruments; crew overload, i.e. tactile, aural, and visual input to the crew at a rate too fast to permit reasonable decisions based on the data received; or too many actions required in too short a period of time; or confusion of controls such as would be caused by adjacent switches where the actuation of the wrong switch could create a dangerous situation. Anonymous reports of such situations are acceptable.

8.4.2.13. All cases of departure from intended takeoff or landing surface onto a surface not designed to normally support takeoff or landing loads.

8.4.2.14. All in-flight fires regardless of damage.

8.4.2.15. All bird strikes regardless of damage.

8.4.2.16. Any occurrence which does not meet the established criteria for a reportable mishap but, in the judgment of the reporting individual, needs to be emphasized in the interest of safety.

8.4.3. Procedures. Report mishaps as soon as possible to the following offices using the following precedence:

8.4.3.1. MAJCOM flying safety officer (FSO).

8.4.3.2. Any FSO.

8.4.3.3. Nearest C2 Center.

8.4.3.4. Base operations.

8.4.3.5. In all cases, retain a copy of all relevant information, and turn it into a home station safety officer.

8.4.4. Required Information. Complete all appropriate areas of the form. Provide as much detail as possible.

8.5. Reports of Violations. Violations identified in AFI 11-202, Volume 3, *General Flight Rules*, alleged navigation errors (including over-water position errors exceeding 24 NM, border and air traffic control violations) will be reported.

8.5.1. Use the following format and include:

8.5.1.1. Factual circumstances.

8.5.1.2. Investigation and analysis.

8.5.1.3. Findings and conclusions.

8.5.1.4. Recommendations.

8.5.1.5. Actions taken.

8.5.2. Not Used

8.5.2.1. Attachments to include:

8.5.2.1.1. Notification of incident.

8.5.2.1.2. Crew orders.

8.5.2.1.3. Statement of crew members (if applicable).

8.5.2.1.4. Documenting evidence (logs, charts, etc.).

8.5.3. In addition to the information listed, the historical flight plan will be downloaded onto a floppy disk and turned into the command and control facility or owning standardization and evaluation office.

8.5.4. Send the original investigation report within 45 days to the appropriate MAJCOM.

8.5.5. The following OPREP-3 reporting procedures for all aircraft notified of navigational errors exceeding 24 NM will be reported under AFMAN 10-206, *Operational Reporting*.

8.5.5.1. On notification of a navigational position error, the aircraft commander (or agency receiving notification) documents the circumstances surrounding the incident (report content below) and ensures submission of an OPREP-3 report through C2 CENTER channels.

8.5.5.2. Report content:

8.5.5.2.1. Name and location of unit submitting report.

8.5.5.2.2. Mission identification number.

8.5.5.2.3. Reference to related OPREPs-3.

8.5.5.2.4. Type of event. (State "Navigation position error.")

8.5.5.2.5. Date, time (Zulu), and location (i.e. ARTCC area).

8.5.5.2.6. Description of facts and circumstances. Include aircraft type and tail number, unit (wing or squadron assignment of crew), home base, route of flight, point of alleged deviation, and miles off course.

8.6. Petroleum, Oil, and Lubricants (POL)—Aviation Fuels Documentation. This section describes procedures for the aviation fuel program (AVPOL) for all USAF aircraft. Procedures are established for correct documentation, processing of forms and invoices, program oversight, and personnel responsibilities. Reference AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station*, AMC decentralization procedures and AFM 67-1, Volume 1, part 3.

8.6.1. Responsibilities. All aircrew and maintenance personnel will be familiar with the procedures and documentation requirements of this chapter. Purchase of aviation fuel not complying with this instruction may become the financial responsibility of the purchaser.

8.6.2. Aircraft will be refueled or de-fueled at DoD locations unless DoD-owned fuel is not available; in which case, fuel may be procured from other sources using the following priority.

8.6.2.1. Defense Fuel Supply Center (DFSC) or Canadian into-plane contracts.

8.6.2.2. Foreign government air forces.

8.6.2.3. Open market purchase to include Shell International Trading Company (SITCO) agreement.

NOTE:

DoD FLIP en route supplements identify locations with into-plane contracts.

8.6.3. AVPOL Documentation Use and Procedures.

8.6.3.1. AF Form 664, **Aircraft Fuels Documentation Log—**Used to log and store all AVPOL transaction documentation. Log <u>all</u> off station transactions on front of AF Form 664 then insert the supporting documentation inside the envelope. Turn AF Form 664, with supporting documentation, in at maintenance debriefing.

8.6.3.2. AF Form 315, **United States Air Force Avfuels Invoice—**Used to purchase aviation fuel at non-DoD activities. See AFI 23-202, *Buying Petroleum and Other Supplies and Services Off-Station*. When completed, log and place inside the AF Form 664.

8.6.3.3. AF Form 15, **United States Air Force Invoice—**Used to purchase ground fuels, oils, or services at non-DoD activities. See AFI 23-202. When completed, log and place inside AF Form 664.

8.6.3.3.1. If the vendor wants to be paid payment without submitting an invoice, the aircraft commander retains the original AF Form 315 to return to home station for accounting and finance processing. Provide two legible copies of the form to the vendor. If the vendor wants to submit an invoice for payment, give the vendor the original AF Form 315 to attach to the invoice.

8.6.3.3.2. Purchases at Canadian into-plane locations will be documented using the local vendor's invoice. AF Form 15 or 315 will not be accomplished. Hand scribe the information from the aircraft identaplate to the vendor's invoice, and complete a separate sheet with the information listed on the Aviation Issues to DoD and Non-DoD, Aircraft Refueling Tender Sheet. See AFI 23-202. Log and place a copy inside the AF Form 664.

8.6.3.3.3. Purchases at SITCO Agreement locations require presenting the aircraft identaplate. The invoice must include the date of transaction, grade of the product, quantity issued or de-fueled, unit of measure, and signature of the Air Force representative. If the vendor also requires completion of an AF Form 15 or 315 in addition to their invoice, annotate on the vendor's invoice "AF FORMS EXECUTED." Log and place the documentation inside the AF Form 664.

8.6.3.3.4. Purchases at non-contract commercial airfields are accomplished using the AF Form 15 or 315. Refer to AFI 23-202, and figures 4, 5, and 6 for guidelines on completing these forms.

8.6.3.3.5. Purchases at foreign military airfields, including replacement-in-kind (RIK) locations, the host country forms are used to record the purchase. Information from the aircraft identaplate should be hand scribed on the local form. Log and place a copy inside the AF Form 664.

8.6.4. AF Form 1994, **Fuel Issue/De-fuel Document** —Used for purchases at all US Air Force locations using a valid DD Form 1896, Jet Fuel Identaplate. Log and place inside AF Form 664.

8.6.5. AFTO Form 781H, **Aerospace Vehicle Flight Report and Maintenance Document**. Complete form per applicable technical directives. When removed from jacket, turn in to maintenance. Maintenance will retain for 90 days after inter-fund billing to provide a secondary audit trail for fuels issue and flying hours.

8.6.6. DD Form 1896, **Jet Fuel Identaplate**, aircraft fuel and oil charge card.

8.6.7. DD Form 1898, **Av Fuels Into Plane Sale Slip**, fuel transaction receipt is used for purchases at other DoD locations, including DFSC into-plane contract locations. Log and place inside AF Form 664.

NOTE:

If the contractor insists on completing their own invoice in addition to the DD Form 1898, the invoice must be annotated "DUPLICATE DD FORM 1898 ACCOMPLISHED."

8.6.8. AF Form 4091, **Mission Data** form—Used to record pertinent data throughout the mission planning, preflight, in-flight, and post-flight phases. Tail number must be 8-digits. Turn this in with post mission paper work.

8.6.9. Wing Scheduling. The wing scheduling office will:

8.6.9.1. Work with and provide a representative to the AVPOL advisory group.

8.6.9.2. Prepare a monthly report for the invoice control officers (ICO) by the 7th of each month stating the following:

8.6.9.2.1. Organization (by squadron).

8.6.9.2.2. Mission design and series (MDS).

8.6.9.2.3. Programmed flying hours for previous and current month.

8.6.9.2.4. Actual flying hours for the previous month.

8.7. AMC Form 54, Aircraft Commander's Report on Services/Facilities. This is an instrument for aircrews to report that services rendered or conditions encountered were unsatisfactory or detrimental to efficient air mobility operations; services rendered or procedures used are worthy of adoption for all MAJCOM organizations; or a performance rendered by a person (or persons) was commendable and deserves recognition. Attempt to solve problems by contacting appropriate supervisors including the senior commander if conditions and situation warrant. If further action is deemed necessary or the problem requires increased visibility, submit this form. Deliver the completed form as follows: To the local command post. At locations with no command and control facility—leave the form to the senior representative. Locations with no senior MAJCOM representative--give the form to next en route command post. This report is designated emergency status code C1; continue reporting during emergency conditions, priority precedence. Submit data requirements in this category as prescribed or by any means possible to ensure arrival on the established due dates. Discontinue electronic reporting during MINIMIZE.

8.8. AMC Form 43, AMC Transient Aircrew Facilities. Any crew member may submit this form. The report may be submitted whether or not an unsatisfactory item is included in the aircraft commander's trip report. Complete AMC Form 43 and send to HQ AMC/MWPS. This report is designated emergency status code C2; continue reporting during emergency conditions, normal precedence. Submit data requirements in this category as prescribed or as soon as possible after submission of priority reports. Continue electronic reporting during MINIMIZE.

8.9. AMC Form 196, Aircraft Commander's Report on Crewmember. The aircraft commander will prepare an AMC Form 196 on each crew member whose performance was outstanding, below average, or unsatisfactory during a mission. Send the report to the commander of the unit to which the crew member is assigned or attached for flying. Form should fully explain outstanding, below average, and unsatisfactory performance.

8.10. AMC Form 423, MIJI (Meaconing, Intrusion, Jamming, Interference) Incident Report Worksheet.

8.10.1. Purpose. The MIJI reporting system is a program to identify, analyze, and disseminate information concerning MIJI incidents.

8.10.2. Procedures. Comply with Air Force policy by reporting all incidents through the OPREP (operations reporting) system. Complete the AMC Form 423 and turn in to base operations upon landing.

Chapter 9

TRAINING POLICY

9.1. Qualification Training. Initial qualification, re-qualification, or upgrade training for pilots will not be conducted on missions with passengers onboard. Mission qualification training may be conducted on missions with passengers onboard if the individual in training is qualified by completing an aircraft evaluation and received a valid AF Form 8.

9.1.1. NOTE: Flight qualification training does not commence until the crew member has successfully completed both phase I training and an AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, evaluation in the applicable aircrew training device.

9.1.2. The instructor and/or flight examiner AC makes the final determination to fly or cancel a training mission in the event that maintenance problems cause unacceptable delays and/or when weather is not suitable for the type training or evaluation to be accomplished.

9.1.2.1. If weather or maintenance delays are encountered, the aircraft commander and the applicable squadron will coordinate a new takeoff time or mission cancellation with 89 OG/OGO and notify base operations if a flight plan has been filed.

9.1.3. Touch-and-go landings with passengers are prohibited.

9.1.4. Civilian employees under direct contract to the DoD, engaged in official direct mission support activities, are considered mission essential and may be onboard when touch-and-go landings are performed.

9.1.5. Requirement for instructor and flight examiner. Conduct simulated emergencies only during training and evaluation or currency flights when an instructor or flight examiner pilot is occupying one of the pilot seats. Instructor pilot candidates who occupy a pilot seat and are under direct supervision of a flight examiner pilot (not in a pilot seat) may conduct simulated emergencies during initial and requalification upgrade evaluations to instructor pilot.

9.2. Simulated Emergency Flight Procedures.

9.2.1. Simulated emergency procedures other than engine-out approaches and landings will be limited to non-critical phases of flight and will be kept to a minimum when IMC or at night. Use a realistic training/evaluation approach and do not compound emergencies.

9.2.2. Special Maneuvers. Refer to applicable MDS directives or approved Stan/Eval checklist handouts or guides for procedures to accomplish training maneuvers that are not covered in aircraft flight manuals.

9.2.3. C-32. Simulated engine out approaches and landings will be accomplished in the simulator only and will not be accomplished in the aircraft.

9.2.4. C-137 and VC-25A. The minimum weather for engine-out approaches/landings (VC-25 and C-137) and no-flap approaches (VC-25A) is published circling minimums (use 600/2 if circling minimums are not published) during daylight, and 1000/2 or circling minimums, whichever is higher, at night.

9.2.5. C-9, and C-20. Do not perform engine-out approaches in C-9, and C-20 aircraft at night or in IMC conditions.

9.2.6. Do not perform C-9 no-flap or no-slat approaches, or C-20/C-37 no-flap approaches at night..

9.2.7. Simulated engine failures. Simulated engine failures are not authorized at less than the engine-out minimum control speeds (as published in the applicable flight manual), when any actual emergency exists, or during no-flap landings. **EXCEPTION***:* No-flap landings with a simulated engine-out are authorized if the no-flap configuration is a consequence of the simulated emergency.

9.3. Touch and Go Landing Limitations. Practice touch-and-go landings only on designated training, evaluation, and currency missions.

9.3.1. Touch-and-go landings. May be performed by:

9.3.1.1. Instructor pilots, instructor pilot candidates on initial or re-qualification instructor evaluations, and flight examiner pilots from either seat.

9.3.1.2. Any pilot from either seat provided that an instructor pilot, instructor pilot candidate on initial or re-qualification instructor evaluation, or flight examiner pilot is in the other seat.

9.3.2. Wind and runway restrictions. Comply with wind restrictions, RCR and crosswind limits, and runway requirements in **Chapter 5** of this AFI. Do not exceed the normal or recommended zone of flight manual takeoff and landing crosswind component charts.

9.3.3. Weather. The minimum reported weather required to perform touch-and-go landings is 300 foot ceiling and RVR 40 (3/4-mile visibility without RVR).

9.3.4. Passengers. Do not perform touch-and-go landings when passengers are aboard.

9.3.5. Reverse thrust. Do not place the throttles in reverse or below flight idle during a touch-and-go landing. Rejected takeoffs will not be practiced.

9.3.6. Jumbo jets. Do not perform touch-and-go landings when jumbo jets or the C-32 are operating in the VFR pattern. **EXCEPTION**: C-137, C-32, and VC-25 aircraft are only restricted to a minimum of 2 minutes spacing.

9.3.7. Stop-and-go-landings. Stop-and-go-landings are not authorized.

9.3.8. Minimum Runway for Touch and Go Landings. The minimum runway for touch and go landings is per the aircraft performance manual or **Chapter 5** of this AFI, whichever is greater.

9.4. Fuel Planning.

9.4.1. Planning Factors for Local Flights. Planning factors for local flights, including standard ramp fuel loads, planned flight training times, planned ground times between locals, and planned minimum landing fuel requirements in **Chapter 6** of this AFI. Local training flights may be scheduled for more or less flying time with the proper coordination.

9.4.1.1. Instructor and examiner aircraft commanders will initiate an approach to a full stop landing when fuel on board is equal to or less than the amount specified in **Chapter 6** as the minimum fuel for landing. Request priority handling from air traffic control if necessary.

9.5. Category II/III ILS Approaches.

9.5.1. Category II/III ILS Training. Flight and evaluation may be conducted at any ILS facility where signal output is accurate and stable enough to achieve the desired training. The following are weather and runway requirements:

9.5.2. Actual weather. No lower than 200-foot ceiling and 1/2-mile visibility (RVR 24); day or night.

9.5.3. Crosswind component. The limitations as prescribed by aircraft flight performance publications, or as authorized in **Chapter 5** of this AFI whichever is lower.

9.5.4. No published decision height (DH). When a Category II DH is not published, DH will be based on HAT of 100 feet.

9.6. Operating Limitations.

9.6.1. Policy: Unless specifically authorized elsewhere in this section, do not practice emergency procedures that degrade aircraft performance or flight control capabilities (in-flight).

9.6.1.1. In an actual emergency, terminate all training and flight maneuvers practice. Training should be resumed only when the pilot in command determines it is safe to do so.

9.6.2. Training Maneuver Restrictions. The following training maneuver restrictions apply to all 89 AW MDS aircraft unless specific aircraft are listed. Use **Table 9.1.** Training Maneuver Restrictions and minimum altitudes.

Table 9.1. Training Maneuver Restrictions.

Maneuver	Altitude Restrictions	Other Restrictions
Actual Engine Shutdown C-9, C-20, C-32, C-37, C-137, VC-25A	5,000 feet AGL Minimum	Do not practice actual engine shutdown unless for an FCF or for an FCF training flight. Under no circumstances will an engine be shutdown for engine out landing or missed approach training.
Any Simulated Emergency On Takeoff On Approach	 Initiate above 500 feet AGL Initiate above 500 feet AGL	 None
Simulated Engine Out Go-Around or Missed Approach C-9 C137, C-20, VC-25A	 Initiate at or above 500 feet AGL Initiate at or above 200 feet AGL	In the event of a go-around below the authorized missed approach altitude, use all engines. On C-9 IP upgrade and evaluation flights, descent to 300 feet AGL is authorized provided both engines are used for the go-around.
Approach to Stalls C-9, C-20, C-37	10,000 feet AGL minimum	Limited to day VMC conditions. Do not accomplish unless required for FCF training, certification, or accomplishment.

Maneuver	Altitude Restrictions	Other Restrictions
Low Approaches-Men and/or Equipment On Runway	Initiate at or above 500 feet AGL	None
Planned VFR Go-Arounds With Simulated Emergencies Other Than Engine Out	Initiate at or above 100 feet AGL	None
Simulated Landing C-20, C-37, C-137	Initiate no lower than 50 feet AGL	Limited to weather required for circling minimums. See ***NOTE*** *9.6.2.1.*
Steep Turns	5,000 feet AGL minimum	Limited to day VMC conditions.
Slow Flight and Flight on the Back Side of the Power Curve C-9, C-20, C-37, C-32, C-137, VC-25A	10,000 feet AGL minimum	Limited to day VMC conditions.

NOTE:

Simulated Landings. Use this procedure only when conducting simulated landing training and not to practice missed approaches; it allows simulated training in restricted aircraft when the objective is to practice setting up the correct landing picture. Begin the go-around no later than computed landing distance plus 1000 feet. No simulated emergencies allowed. Use the normal landing configuration: Gear down, flaps at 40/50 for the C-137, flaps 20/39 for the C-20. All other training restrictions apply.

9.7. Prohibited In-Flight Maneuvers. The following maneuvers will only be accomplished in the simulator and not be practiced or demonstrated in-flight:

9.7.1. Simulated engine-out takeoffs.

9.7.2. Aborted takeoffs.

9.7.3. Full stalls.

9.7.4. Unusual attitudes.

9.7.5. Dutch roll demonstrations.

9.7.6. Simulated emergency descents.

9.7.7. No-flap landings.

9.7.8. No-flap approaches (C-9, C-20, and C-37 only).

9.7.9. No-slat landings.

9.7.10. Simulated jammed stabilizer approach and landings.

9.7.11. Split flap landings.

9.7.12. Landing with simulated inoperative hydraulic system.

9.7.13. Rudder boost-off landing.

9.7.14. Simulated two engine out flight.

9.7.15. Tactics maneuvers (except MAJCOM approved maneuvers).

9.7.16. Simulated engine out approaches (C-32, C-37 only).

9.7.17. Simulated engine out landings (C-32, C-37 only).

9.8. Instructor Pilot Briefing. Before all training and evaluation missions, instructors and evaluators will brief their crews on all aspects of the mission according to locally-developed briefing guides. Briefing guides will be approved by OG/OGV.

9.9. Debriefing. Instructors and flight examiners will accomplish the following:

9.9.1. Review and evaluate overall training performed.

9.9.2. Review training requirements fulfilled for each student and aircrew member.

9.9.3. Answer technical questions.

9.9.4. For crewmembers requiring further training, assign specific areas for further study prior to the next training period.

9.9.5. Complete training and evaluation records.

9.10. Simulated Instrument Flight. Artificial vision restricting devices are not authorized for any phase of flight. Simulated instrument flight may be flown and logged without the use of a vision restricting device.

Chapter 10

LOCAL PROCEDURES

10.1. General. The 89th AW will publish local and unique operating procedures.

Chapter 11

NAVIGATOR PROCEDURES

11.1. General.

11.1.1. This chapter consolidates unique navigation procedures and forms into one location. Use navigation forms prescribed by this volume on all flights.

11.1.2. General instructions for the use of AF Form 4113, **Flight Plan and Record** , AF Form 4078, **Position Label**, and AF Form 4053, **INS Flight Plan and Log**, are provided. The navigator will record sufficient information to accurately replot the mission. Submit navigation forms, records, charts, fuel logs, etc., to the navigation section after mission completion and dispose according to AFMAN 37-139.

11.2. Mission Planning.

11.2.1. Flight Plan. Cross-check the computer flight plan (CFP) planned route against the route of flight entered on the DD Form 175, **Military Flight Plan** or DD Form 1801, **DoD International Flight Plan**, and the approved diplomatic clearance.

11.2.2. Navigator Station. The navigator who prepares or accepts the flight plan will remain on duty at the navigator's station during departure and will brief the relieving navigator. The navigator ensures all required fuel computations are accurate and complete, and, in addition, will ensure ramp fuel load is compatible with mission requirements.

11.2.3. Forms. Complete an AF Form 4113 for each flight. The flight plan may be either a CFP or a manual flight plan. AF Form 4053, may be used in lieu of the AF Form 4113 for manual flight plans.

11.3. Flight Charts. Use a chart to show flight progress on all Category I routes. Show the following:

11.3.1. Navigator's name and rank and the mission number.

11.3.2. Coordinated universal date in the vicinity of departure or coast-out point.

11.3.3. The flight plan course. Reporting points, with proper names, will be labeled.

11.3.4. Plot fixes or positions. Show time of each fix or position. Use navigation symbols to plot the route of flight, navigation checkpoints, fixes, and positions on navigation charts as illustrated in AFMAN 51-40, *Air Navigation,* Attachment 1. An AF Form 4078 or a navigator's log may be used to record fixes.

11.3.5. Reuse flight charts (on same mission) when plotting accuracy of fixes or position determination is not affected.

11.3.5.1. Use a separate chart for each mission. Multiple legs on the same chart are permissible.

11.3.5.2. Retain charts with the navigator's logs to allow evaluation and replotting of the mission.

11.4. Navigator Procedures.

11.4.1. Radios and Clearances. The navigator monitors the primary command radio unless directed to do otherwise. The navigator records ARTC clearances and monitors the read back.

This includes all ATC instructions involving departure, en route, and approach procedures.

11.4.2. Airborne Radar Monitor of Departures and Arrivals. Immediately after takeoff and at the beginning of descent, the navigator cross-checks available flight instruments with the airborne radar presentation to ensure the aircraft remains clear of obstructions. Monitor the radar on all departures to a safe altitude and during all arrivals.

11.4.3. Navigator Flight Following. Use a terrain chart to monitor the aircraft position during all departures and arrivals. The terrain chart should be an ONC or larger scale chart.

11.4.4. Navigating with INS. When using the INS as the primary means of navigation, use all available navigational aids (NAVAID) to monitor INS performance and ensure compliance with course and ETA tolerance. On airways, INS may be coupled to the autopilot provided the applicable airway NAVAIDs are selected and monitored on the other HSI and bearing distance heading indicators BDHI.

11.4.5. Compass Deviation. Compute deviation for each compass system. Do this deviation check as soon as practicable after initial level-off or coast-out. Determine the heading check by celestial observation, or by comparison to an inertial derived heading. ***EXCEPTION*** : Deviation check is not required on Category II routes or on flights transiting Category I routes of 2 hours or less, when both of the following conditions hold true:

11.4.5.1. Aircraft is equipped with two or more separate compass systems (the standby compass is not considered a system for this requirement).

11.4.5.2. Difference between systems does not exceed two degrees.

11.4.6. General Fixing Requirements. A coast-out fix will be obtained on entering the Category I portion of a mission leg and all appropriate NAVAIDs will be used to resolve and validate INS accuracy. Use all available NAVAIDs to monitor INS accuracy during the period 15 to 30 minutes prior to ADIZ penetration or 40 minutes to 1 hour prior to coast-in, whichever comes first. Plot intermediate INS positions on the chart within 10 minutes after passing a waypoint. This procedure will aid in early detection of erroneous waypoint insertion. The interval between plotted INS positions will not exceed 1 hour and 20 minutes. Normal pacing should be one fix or position.

11.5. Flight Records and Forms.

11.5.1. AF Form 4113 instructions:

11.5.1.1. The flight plan and record portion of this form may be used for manual flight and fuel planning. A CFP may be placed in the flight plan section in lieu of manual flight planning.

11.5.1.2. Complete heading and planning blocks as prescribed in **Chapter 10**.

11.5.1.3. Use the "remarks" section to record pertinent information related to the flight plan section, diversion airfields, and clearances.

11.5.1.4. Complete the "block" information section. The "wind factor data" section is optional.

11.5.2. Fixes for each flight over a Category I route may be recorded using the AF Form 4078 or navigator's log.

11.5.3. Fuel Management Log. When using AF Form 4113, make entries at intervals coinciding with entries on unit develop log (89 AW Form 139, **C-25/C-137 Mission History)**. The pilot in control of aircraft will review the fuel management log after each entry. Entries may be discontinued at the dis-

cretion of the AC. Make entries as prescribed in **Chapter 10**. Complete the fuel management portion of AF Form 4113 for each flight over a Category I route:

11.5.3.1. When flight plan time between suitable en route airfields within 50 NMs of the route of flight exceeds 5 hours, or

11.5.3.2. On any leg over 5 hours when unidentified extra fuel is 5000 pounds or less (C-137 only), or

11.5.3.3. When directed by the AC.

11.5.4. AF Form 4093. Use this form in lieu of AF Form 4113 for manual flight and fuel planning.

11.6. Celestial Fixing. See AFMAN 51-40.

11.7. Grid Navigation.

11.7.1. General. Grid procedures should be used when flying north of 70 degrees north latitude (except Alaska) and south of 60 degrees south latitude or where the convergence of meridians or magnetic variation changes preclude using true and magnetic direction references.

11.7.1.1. When INSs are operating, set compasses to computed grid heading in order to have a current grid heading available should INSs fail. As long as INSs are operative, the gyro log on AMC Form 25 need not be used.

11.7.1.2. If INSs fail, aircraft will be directed by grid heading until exiting the grid area.

11.7.2. En route requirements with INSs inoperative:

11.7.2.1. Check aircraft's grid heading each 30 minutes during the first hour after grid entry. Thereafter, heading checks are required every hour. Complete the grid entry/exit section of the AF Form 4113 before heading reference changes. When entering grid operation, apply convergence to the true heading. Establish the aircraft on computed true heading references. When exiting grid, apply variation to obtain magnetic headings to the flight plan to verify the accuracy of the courses measured and conversion data used. This will ensure the validity of initial entry headings and provide precise target headings for exit.

11.7.2.2. Determine the precession information for gyros after each heading check. Do not reset the gyros unnecessarily. When precession is one degree or less do not reset the gyros since the error may be in the observation.

11.7.2.3. If a grid heading can't be determined at the regular time interval by celestial, use the previous precession information to determine heading changes.

11.8. LORAN. See AFMAN 51-40 and **Chapter 10** of this volume.

Chapter 12

FLIGHT ENGINEER (FE)/FLIGHT MECHANIC (FM) PROCEDURES

12.1. General. This chapter outlines additional procedures not in the aircraft flight manuals or other technical orders for FEs and FMs.

12.2. Responsibilities. The first FE or the FM is responsible for the condition of the aircraft, keeps the AC informed at all times of changes in aircraft status, and acts as enlisted aircrew coordinator. FEs and FMs will supervise or perform aircraft servicing and maintenance at en route stations as required to maintain aircraft in a mission-capable condition. C-137/VC-25A FEs supervise the crew chief on missions and lend assistance when required. At the end of each flight, the FE or FM will police the flight deck if there is no CSO onboard.

12.2.1. NOTE: FEs and FMs are authorized to taxi 89 AW aircraft IAW MAJCOM directives.

12.3. Authority to Clear Red X Symbols in the AFTO Form 781A. When authorized by the home station logistics group commander, 89 AW FEs and FMs are authorized to clear red X write-ups on all systems of the aircraft on which they are qualified.

12.4. Refueling and Defueling. All qualified 89 AW FEs and FMs are authorized to refuel and defuel aircraft.

12.5. Concurrent Servicing Operations (CSS). Concurrent servicing is authorized according to T.O. 00-25-172. All 89 AW FEs/FMs are qualified to perform CSS supervisor duties. The FE/FM is the final authority for coordinating all en route servicing operations.

12.6. 89 AW C-137 In-flight Data Card. C-137 FEs will complete the 3-engine portion of the in-flight data card before all missions including missions that require (unit developed) **89AW Form 139, VC-25A/C-137 Mission History**. That portion will be completed using a +10 degrees temp day or forecast for the planned altitude. The remainder of the form will be completed in a timely manner after level-off. When 89 AW Form 139 is required, only the initial takeoff and level off card is required. If 89 AW Form 139 is not required, the card will be completed once each hour until 3-engine altitude is reached. Once 3-engine altitude is reached, have Nl, turbulence and MEA readily available.

12.7. Aircraft Taxi. FEs/FMs will not taxi when the RCR is worse than wet or visibility is less that 1\4 mile.

12.8. Pushback Operations. The crew chief will be on headset for all pushback operations away from home station. C-137 FEs will assist the crew chief by assuring proper ground clearance is available, nose landing gear (NLG) scissors are connected, and the NLG downlock pin is removed prior to boarding aircraft. All pushback/towing operations performed enroute by C-20/37 aircrews will be IAW AFI 11-218 and the 89 OG/OGV approved checklist inserts.

12.9. Use of Headset on C-137 Preflight. For all home-station departures, the FE or scanner will use the headset during flight control surface check. Away from home-station, using headset is optional, unless a maintenance problem exists that requires using the headset.

12.10. C-137/VC-25A Local TOLD Card. The FE will complete the entire TOLD card, including the landing portion, prior to departure. Use the takeoff GW to compute the data.

12.11. C-137/VC-25A Multiple Full-Stop Landings. For all practice, full-stop landings, the FE will complete a new TOLD card using actual GW, field, and weather conditions.

12.12. Monitoring Primary Radios. The FE/FM will monitor the primary radio for flight clearances, altitudes, heading changes, and radio frequencies. The FE/FM is not required to copy departure clearances.

12.13. Use of Second Flight Engineers. A qualified second FE may perform exterior pre-flight duties without supervision. When supervised by an instructor or flight examiner FE, a second FE may occupy the FE position during takeoff and landing. The second FE does not need direct supervision by a flight examiner or instructor during climb, cruise, and descent at altitudes above 10,000 feet.

Chapter 13

FLIGHT ATTENDENT (F/A) PROCEDURES

13.1. General. This chapter outlines procedures for Flight Attendants (F/A) not in the aircraft flight manuals or elsewhere in this volume.

13.2. Responsibilities. The F/A is the direct contact between the US Air Force and the passenger. The F/A' primary duties are to instruct passengers in the use of emergency equipment and conduct emergency egress when necessary. Additionally, F/As act as the AC's cabin representative, provide cabin service and maintain cabin cleanliness throughout the mission. On multi-F/A crews the first F/A acts as F/A supervisor and delegates specific duties and responsibilities to each F/A. At home station, one or two F/A may be required to assist with post mission aircraft cleanup. Upon completion of missions, maintenance personnel should allow F/As one hour (C-20/37/9) or two hours (C-137/32) of uninterrupted time to clean aircraft.

13.3. F/A Standards.

13.3.1. When making contact downtown, F/As must wear Service Dress, F/A uniform or business attire (business suit with tie, conservative civilian dress, blazer with dress slacks or skirt). When making contact downtown, ensure that two F/A are present for accuracy of requirements and security of funds.

13.3.2. Any F/A approaching SAM aircraft on the DV row should be in the SAM uniform. This does not apply to cleaning crews, who should not approach the aircraft until all passengers and their baggage have departed the area.

13.3.3. Any problems encountered with passengers during the mission (i.e. mistreating the aircraft, disorderly behavior, etc.) should be forwarded to the contact through the Aircraft Commander for appropriate action.

13.4. Pre-mission Duties.

13.4.1. Contact the AC or navigator for draft itinerary times and any information already received concerning cabin service requirements. Provide en route mission ice requirements at this time.

13.4.2. Call or visit the mission contact officer to determine cabin service requirements. Get the name of the onboard contact and obtain funds, if available (if not received from the mission contact, obtain funds from the Inflight Funds Custodian). Complete all portions of the AF Form 4084, **Air Passenger Specialist Mission Planning Worksheet**. Procure needed supplies (food, beverages, special requirements, etc.) and retain all receipts.

13.4.3. The first F/A on C-25, C-9, C-20, C-32, C-37, and C-137 aircraft will conduct an F/A briefing to assign F/A positions and duties. For unplanned emergencies, all F/A will act in the position they are assigned; in planned emergencies, the highest qualified F/A will assume command of the emergency and all F/As.

13.5. Preflight Duties.

13.5.1. Perform applicable preflight or en route checklists. On multi-F/A aircraft, this preflight may be accomplished by one F/A or divided into zones, as necessary. Check that applicable passenger information cards are properly distributed.

13.5.2. Upload food and fleet items and stow as necessary. If aircraft availability and maintenance scheduling allows, consideration should be given to loading non-perishable items the day prior to departure.

13.5.3. Prepare meals as required. Focus of preflight duties will be directed toward passenger service to ensure completion prior to station time and should not be inhibited by crew meal service.

13.5.4. Coordinate receipt of passenger manifests.

13.5.5. Coordinate passenger baggage loading and security. If loading space-available passengers at a non-US military facility, perform the following anti-hijacking inspections as directed by the AC:

13.5.5.1. Check for proper identification and document passengers on AF Form 96, **Passenger Manifest**.

13.5.5.2. Inspect baggage in an area well away from the aircraft.

13.5.5.3. Load baggage to prohibit in-flight passenger access (except for carry-on baggage).

13.5.5.4. Inspect carry-on baggage prior to boarding passengers.

13.5.6. Coordinate passenger loading. Accomplish passenger briefing, if required.

13.6. Passenger Handling. Keep the AC informed of all passenger problems, unusual requests, etc.

13.6.1. Coordinate with the AC before answering questions about the mission.

13.6.2. Do not unduly alarm passengers by relaying details of abnormal conditions not readily discernible by passengers.

13.6.3. Keep the AC informed of all passenger problems, unusual requests, etc.

13.7. Border Clearance. Certain forms for border clearance are required by customs, immigration, public health and agriculture. The F/A is the custodian for these and other required forms and will ensure adequate quantities are aboard the aircraft prior to takeoff. All first F/As should be familiar for the Foreign Clearance Guide requirements for applicable destinations and will distribute forms to the crew and passengers, as necessary, for completion prior to landing. Ascertain paperwork is forwarded to applicable personnel at en route and terminating stations.

13.8. En Route and Post Flight Duties.

13.8.1. F/As will provide cabin and meal service, while maintaining the highest standards of safety and cabin discipline. During critical phases of flight or turbulence, ensure all loose items are stowed and cabin service is suspended, if necessary.

13.8.2. Attend to flight crew needs when passenger service duties permit.

13.8.3. Complete applicable border clearance requirements and forms.

13.8.4. Assist with passenger deplaning and baggage offload or transfer. Ensure passengers do not leave required baggage or personal items on the aircraft.

13.8.5. At en route stops, F/As are responsible for aircraft cleanup. They are also responsible for ensuring that all food items are properly stowed and aircraft is mission ready before departing for over-night stops. All perishable items not used will be disposed of in appropriate trash containers prior to leaving the aircraft. Blankets and pillowcases will be changed en route if they are soiled. All blankets and pillowcases used during a mission will be changed upon return to home station. Upon return to home station, one or two F/As may supervise/assist with post-mission aircraft cleanup of passenger cabin, galley(s), and lavatories.

13.8.6. Arrange or procure food and beverages required for subsequent mission legs. When purchasing wet/dry ice from vendors who will not accept an AF Form 15 or credit card, obtain funds from the crew transportation officer and provide him/her with a receipt. The transportation officer will submit a SF 1164, Claim for Reimbursement of Expenditures.

13.8.7. Under no circumstances will either perishable or non-perishable items purchased for the official party be consumed by crewmembers or ground support personnel, or taken from the airplane for personal use.

13.9. Forms.

13.9.1. AF Form 4084. Use this form to assist the F/A in organizing passenger service requirements. The reverse of the form is a checklist to help inventory mission supplies. Record details received from the contact officer on the front of the form. Use the reverse as a pre-mission and preflight check-off list. Individual unit may overprint unique requirements on this form.

13.9.2. AF Form 4085. Use this form to record all expenses related to mission requirements. On each mission, separate copies of the AF Form 4085, will be maintained for passenger and crew meals/special requests. Ensure receipts are separated and retained for mission contact/AC perusal. If unable to get a receipt from a vendor, prepare an itemized list of purchases and sign and date it. Upon mission completion, the first F/A will annotate the method of disposal of all excess non-perishable passenger food items on the reverse side of the AF Form 4085. If the mission contact wants the leftover items, document by writing “All leftover items given to the contact”. If the contact does not want the leftover items, annotate that “leftover items were disposed of per contact officer’s instruction”, and give them to charity. In both instances, the F/A will sign below either statement and present it to the AC for approval. The 89 AW will develop instructions (See 89 AWI 34-201). Individual unit may overprint unique requirements on this form.

Chapter 14

COMMUNICATION SYSTEMS OPERATOR (CSO) PROCEDURES

14.1. General. This chapter outlines procedures for CSOs not in aircraft flight manuals, other Air Force directives, or elsewhere in this volume.

14.2. Responsibilities. CSO is responsible for inspecting, operating, and maintaining all communications and electronic equipment aboard the aircraft while on a mission. Monitor and safeguard all classified material. Only CSOs are authorized access to the aircraft safe.

14.2.1. Assure communications resources are available to meet the DV party's communication requirements.

14.2.2. Assure adequate communications and electronic spare parts are available to support the mission.

14.2.3. Distribute message traffic aboard the aircraft. CSOs will not serve as a courier for classified message traffic received during ground operations.

14.3. Pre-Mission Procedures.

14.3.1. Review 89 AW Andromeda Mission Printout for mission profile and coordinate with the users communications agency to determine mission communication requirements.

14.3.2. Determine spare communications and electronic equipment requirements and arrange procurement.

14.3.3. Determine crypto kit requirements and advise 1 AS/DOKT (COMSEC Account). Arrange with the AC if special arrangements must be made to safeguard COMSEC material during a mission.

14.3.4. Notify 89 OG/OGO (Current Operations) of all special communication system support requirements through the squadron SOC if the special requirements can not be arranged by the CSO planning the mission or the special request was denied by a support agency. 89 OG/OGO will coordinate availability with applicable agencies.

14.3.5. Review applicable Flight Information Publications and the Foreign Clearance Guide to determine if there is any special communication reporting during en route travel or on arrival into all destinations.

14.4. Pre-Flight Procedures.

14.4.1. Pick-up or arrange delivery of crypto kits.

14.4.2. Accomplish preflight inspections according to flight manual checklist and COMSEC checklist.

14.4.3. Advise using and/or supporting agencies of aircraft communication status, i.e. limitations, available circuits, etc.

14.4.4. Obtain a passenger manifest. Ensure the manifest is accurate for each leg of the mission.

14.5. In-Flight Procedures.

14.5.1. Maintain continuous phone patch capability and data circuit capability, as required. All circuits available for the mission will be monitored at all times.

14.5.2. Transmit departure and arrival reports and other C2 communications as directed by the AC.

14.5.2.1. The Andrews Command Post is the single point of contact for reporting all arrival and departure information for all 89 AW SAM missions. Some ground support agencies may require certain departure and arrival information items to keep track of their DV locations.

14.5.2.1.1. Departure Message. The message will contain the call sign, the time of block departure, ETB to next station, DV code, total number of official passengers, total "space A" passengers, and if applicable, the reason for a late takeoff.

14.5.2.1.2. Arrival Message. The message will contain the call sign, block time of arrival, pounds of fuel burned, leg flying time, air miles, maintenance alpha status, and if different from Andromeda itinerary, the RON location and phone number of the aircrew.

14.5.2.1.3. Arrival Message for Home Station. The message will contain the call sign, block time of arrival, pounds of fuel burned, leg flying time, maintenance (ALPHA) status of aircraft (to include 781A write-ups), aircraft parking spot or arrival, request crew transportation, ramp freeze status. When returning from overseas, request customs, agriculture, and immigrations if needed.

14.5.2.2. Two Hour Out Report. A two hour out report will be sent to the next destinations to update them of the DVs arrival time. All requests for aircraft servicing and any other special request should be made at this time.

14.5.3. Transmit HF oceanic position reports if directed by the AC and provide timely and accurate weather reports during the mission.

14.5.4. Relay DV messages and arrange passenger phone patch service, as required. Brief passengers on phone patch procedures. Advise passengers what type of circuit their phone patch is being placed over i.e. "Secure" or "NonSecure", and that circuits are subject to monitoring.

14.5.5. Receive and distribute message traffic. All message traffic and requests will be delivered to passengers immediately after receipt. Assure classified messages are stamped with applicable markings *and note any special delivery instructions. Recipients must sign for all Top Secret messages.*

14.5.6. Comply with local directives concerning disposition of messages, files, and logs.

14.6. En Route Security of Classified Material.

14.6.1. When ASNCOs are carried, any level of classified material may be left onboard the aircraft in locked safes/security containers.

14.6.2. When ASNCOs are not carried, after each flight and before departing aircraft, zeroize all COMSEC equipment. All superseded keying material will be destroyed. All remaining keying material and other COMSEC material will be placed in a locked safe for CONUS missions. For all missions, place all classified keying material in a NSA approved sealable bag (computer disks will be placed in an anti-static bag before they are placed in the bag). After ensuring that the number on the strip matches the number on the bag, seal the bag and remove the strip for safekeeping. The sealable bag will be placed in the COMSEC kit and placed in the aircraft safe, which will be locked. Material will remain sealed and locked until the crew shows for the next flight.

14.6.3. The aircraft will be sealed and/or the alarm system activated (assuming no ASNCOs accompanied the aircraft) for all missions carrying classified material.

14.6.4. Upon arrival at aircraft and before each flight, the aircraft, security container, security bag and contents must be checked for signs of tampering or penetration. Match the serial number on the security bag with the serial number on the strip. Check security bag for any cuts, rips, discoloration or other abnormalities. Inventory (destroy as necessary) all COMSEC materials. If any violation of the aircraft safe or its contents has taken place, or if the inventory shows discrepancies, you will assume a compromise has taken place. If this occurs, immediately contact SAM Command Post and 1 AS/DOKT by secure means if possible. Advise them of the situation and the mission impact. If a secure means is unavailable, identify to 1 AS/DOKT the line items from DD Form 153 in question. They will advise the controlling agency. 1 AS/DOKT will advise you as to the disposition of the material and what actions to take with it.

14.6.5. US military guards not assigned to the 89 AW may be treated as security guard status after their credentials have been verified. Foreign military/civilian guards fall into several categories. 89 OG/OGO will provide guidance on each situation. The Aircraft will always be sealed and/or alarmed any time guards not assigned to the 89 AW are used to guard the aircraft.

14.6.6. Securing Passenger Classified Material. Prior to leaving an aircraft, the CSO and F/A will conduct a walk through of passenger compartments. During a mission if classified documents are visible, secure the documents in the aircraft safe/security container and leave the passenger a note. If the documents exceed the safe's capacity, safeguard the documents, then attempt to contact the party and find adequate storage. When returning to home station at the end of a mission if classified documents are left on the aircraft by a passenger, work with the VIP lounge and Andrews CP to have the classified documents returned to the passenger (do not release classified to uncleared personnel).

14.7. Post Flight Procedures.

14.7.1. Accomplish postflight inspections including flight manual and COMSEC checklists.

14.7.2. Secure all classified materials and equipment. Put all classified waste in a burn bag marked with the highest classification, handling instructions, and mission number.

14.8. Post Mission Procedures.

14.8.1. Attend aircrew debrief as required.

14.8.2. Turn-in crypto kits.

14.8.3. Debrief communication systems operator superintendent and other applicable agencies.

14.9. Destruction of Classified Material.

14.9.1. COMSEC Material Destruction. Any reliable DOD member may act as the witnessing official regardless of the individual's security clearance. If the witnessing official does not have the required clearance, allow the individual to see only the short title of the document/keylist being destroyed. COMSEC kits will be updated IAW security directives throughout the mission.

Chapter 15

AIRCRAFT SECURITY NONCOMMISIONED OFFICER (ASNCO) PROCEDURES

15.1. General. This chapter outlines aircrew responsibilities and procedures for aircraft security NCOs (ASNCO) assigned to Presidential and SDSAM aircrews. The 89th Security Police Squadron ASNCOs are integral members of the SAM aircrew and are under the authority of the AC. The ASNCOIC will be pre-designated and will supervise the other ASNCOs during the mission.

15.2. Responsibilities. ASNCOs protect Presidential, SENEX, and SDSAM aircraft and associated equipment according to AFI 31-101, volume 1, and **Chapter 7** of this volume. ASNCOs are responsible to the AC, who approves and coordinates any authorized deviations from the procedures in AFI 31-101, volume 1. ASNCOs coordinate aircraft security protection with local military and civilian authorities. Assure local security efforts are smoothly integrated into the total security system to protect the aircraft.

15.3. Premission Procedures. All ASNCOs will attend the AC's aircrew briefing, when applicable. The ASNCOIC briefs all ASNCOs on mission requirements, threat analysis, and specific duty assignments for the mission. The ASNCOIC contacts the AC when notified of the mission and assists in coordinating advance security support at en route destinations as required.

15.4. Preflight Procedures. ASNCOs will arm themselves and will normally report to the aircraft not later than 2 hours prior to scheduled departure time.

15.4.1. Security Check. Conduct a complete security check of the aircraft, inside and outside. Assume sentry positions as directed by the ASNCOIC.

15.4.2. Mission Information. The ASNCOIC is responsible for obtaining passenger manifests and crew orders, mission itinerary cards, en route stop cards, and the Aircraft Entry Control Log.

15.4.3. Aircraft Access Control. Personnel listed on the applicable unescorted entry list (UEL) or the passenger manifest will be granted unescorted entry on the aircraft. Manifest changes for Presidential aircraft must be approved by the duty military aide to the President. Manifest changes for SENEX aircraft are approved by the AC. Manifest changes for SDSAM aircraft are approved by the mission contact officer. ASNCOs board the aircraft only after all passengers and other aircrew members have boarded.

15.4.4. Baggage Control. One ASNCO will be positioned as a sentry at the baggage compartment until all baggage is loaded and the compartment is secured. Assure all baggage is properly identified. Cross-check baggage labels against the passenger manifest.

15.5. In-Flight Procedures. Report all security problems to the AC. When the aircraft is transporting space available passengers, the ASNCOIC assigns ASNCOs to occupy seats in each passenger compartment where space available passengers are seated. Don't allow space available passengers to have access to their stowed baggage in-flight.

15.6. Post-Flight Procedures. When the aircraft blocks in, ASNCOs deplane first. Take up pre-designated positions fore and aft of the aircraft. When the baggage compartment is opened, one ASNCO monitors baggage unloading and remains as a sentry until the baggage compartment is secured. If using

secured fuel supplies, one ASNCO checks the numbered seals against the documents provided by the mission contact officer or advance agent.

15.6.1. Local Security. If local security forces will augment ASNCOs during ground times, the ASNCOIC will brief them on their duties and responsibilities.

15.6.2. Miscellaneous. At least one ASNCO will always be stationed as primary sentry at all times. Presidential, SENEX, and SDSAM aircraft protected by an ASNCO are not sealed. The ASNCOIC schedules ASNCOs for sentry duty.

15.7. Post Mission Procedures.

15.7.1. Continued Security Protection. If the aircraft is Presidential or SENEX or if the aircraft is to maintain upgraded security status, the ASNCOs will maintain security protection until relieved by appropriately cleared 89 SPS sentries.

15.7.2. Terminating Security Protection. If the Presidential aircraft or SDSAM security status is to be terminated, ASNCOs remain at the aircraft until all passengers and baggage are unloaded and the AC terminates the upgraded security status according to AFI 31-101, volume 1.

15.7.3. After Termination. When relieved, turn in weapons and ammunition to the armory. Comply with local debriefing requirements. The ASNCOIC turns in the completed **AF Form 1298, Aircraft Entry Control Log**.

15.8. AF Form 1298, Aircraft Entry Control Log. Consult local directives concerning completion and authentication procedures for this form.

Chapter 16

CREW CHIEF DUTIES AND RESPONSIBILITIES

16.1. General. This chapter outlines duties and responsibilities of 89 AW aircraft crew chiefs. Normally, only VC-25A/C-137/C-32 crew chiefs fly with their aircraft on all missions. Crew chiefs can be scheduled to fly on other aircraft as directed by the 89 AW commander. The parent maintenance organization schedules crew chiefs and provides appropriate squadron operations section the name of the crew chief assigned to each mission. The crew chief will be listed on AMC Form 41. Certain 89 AW maintenance personnel are authorized to taxi aircraft. Qualification and currency requirements are in AFI 11-218.

16.2. Responsibilities. The crew chief is the primary aircraft mechanic and performs maintenance to maintain a mission-ready aircraft status. After reporting for a mission, the crew chief is responsible to the enlisted aircrew coordinator (EAC). The crew chief will:

16.2.1. Perform or assist aircraft servicing at all stations.

16.2.2. Accomplish preflight, thru-flight and post-flight inspections as required. Assist flight engineers during their preflight as needed.

16.2.3. Manage the aircraft's en route mission support kit (MSK) and log.

16.2.4. Perform maintenance at en route stations.

16.2.5. Perform aircraft block-out and block-in.

16.2.6. Ensure inventory of life support equipment and dash-21 equipment is accomplished, as the AC's representative.

16.2.7. Maintain the AFTO Forms 781 series. Inform enlisted aircrew coordinator and AC of all maintenance discrepancies entered in AFTO Form 781A.

16.2.8. Be authorized by 89 AW LG/CC to clear red X discrepancies on all systems at en route stations.

16.2.9. Be responsible for the DD Form 1896**, Jet Fuel Identaplate.**

16.3. Procedures. Attend the AC's pre-mission aircrew briefing. Brief the flight engineers and AC on status of the aircraft, recent maintenance history, and MSK concerns. Discuss requirements for aerospace ground equipment (AGE) needed at all stations. Confirm aircraft configuration.

16.3.1. For All Departures. Assure the required fuel load, as briefed by the AC, is aboard. Ensure all MSK items required for mission are aboard aircraft. Arrange aircraft taxing or towing to terminal or DV spots when required. Ensure required AGE is available and connect to aircraft. Assist in placing boarding steps or ramps in position and removal when tasks are complete.

16.3.2. In-flight Duties. Perform in-flight maintenance to ensure DV and passenger comfort and optimum aircraft system operation.

16.3.3. For Intermediate Stops. Deplane with the flight engineer. Chock aircraft, apply external power, and assist in positioning boarding steps and ramps. Perform or assist in all servicing operations. Perform any required inspections. Ensure required AGE is available for departure.

16.3.4. For Overnight Stops. Deplane with the flight engineer. Chock aircraft, apply external power, and assist in positioning boarding steps and ramps. Accomplish post-flight inspections. Perform or assist all servicing operations. Install engine, air conditioning, and pitot covers.

16.3.5. If Maintenance Is Required. Perform all maintenance that cannot be accomplished in flight at en route stations, upon the AC's discretion. If parts are required, use the MSK. Coordinate with the EAC and AC before ordering or purchasing aircraft parts. Determine the part number, page number, and index number from the appropriate TO. Accomplish the parts order form maintained by the CSOs. The AC will determine the delivery location for all shipped parts.

16.3.6. On Return to Home Station. Comply with local debriefing requirements. Replace any used MSK items.

Chapter 17

AIR REFUELING

17.1. Air Refueling (AR) Limitations. This chapter establishes guidelines applicable to VC-25A aircraft and aircrews, and is supplemental to those prescribed by the flight manual and other applicable directives. The PPO training for air refueling includes simulators and alternate USAF B-747 derivative aircraft. The use of Presidential aircraft for air refueling training is at the Presidential pilots' discretion.

17.1.1. Refueling During Training Missions. AR should not be accomplished during training missions when:

17.1.1.1. Conditions are encountered that, in the opinion of the aircraft commander, result in marginal control of either aircraft or the boom.

17.1.1.2. Either the tanker or the receiver has less than the full number of engines operating.

17.1.2. Tanker Autopilot. Tanker pilots must notify receiver pilots when any axis of the autopilot is not used. If the tanker copilot is required to fly autopilot-off for training, unqualified receiver pilots will not fly the aircraft. Tanker pilots must notify the receiver when copilot autopilot-off training is conducted and receive confirmation that the receiver pilot flying the aircraft is qualified.

17.1.3. AR Without Tanker Disconnect Capability. Without tanker disconnect capability means the boom operator cannot trigger an immediate disconnect. AR will not be conducted after a known loss of tanker disconnect capability. ***EXCEPTIONS***. Fuel emergency situation.

NOTE. When conducting AR without tanker automatic disconnect capability, limit contacts to the minimum number necessary to complete mission requirements. Do not accomplish boom limit demonstrations, or practice emergency separations while in the contact position

17.1.4. Override Boom Latching**.** This is an emergency procedure. Tanker automatic disconnect limits and tanker normal and manual disconnect capability is inoperative. If approved, use of this procedure will be authorized in the mission directive.

NOTE. Boom operator and receiver pilot must coordinate all actions as required by applicable directives and checklists when making AR contacts using emergency boom latching procedures.

17.1.5. Reverse AR procedures can be accomplished for operational necessity only.

17.1.6. Practice Emergency Separations:

17.1.6.1. Prior to the actual accomplishment of a practice emergency separation, coordination between the tanker pilot, boom operator, and receiver pilot is mandatory. Coordination must include when the separation will occur and who will give the command of execution. Tanker pilot coordination may be accomplished over interphone with the boom operator.

17.1.6.2. If separation is initiated from the contact position, the receiver's AR system must be in normal, and a boom operator disconnect capability with the receiver must exist.

17.1.6.3. Practice emergency separations will not be accomplished with passengers on board unless passengers are seated with seat belts fastened.

17.1.7. Receiver AR Training for Unqualified Receiver Pilots. (This includes copilots, aircraft commander upgrade candidates and aircraft commanders refueling from the right seat). In-Flight training will be accomplished under direct IP supervision. The following procedures apply:

17.1.7.1. The receiver pilot must inform and receive acknowledgment from the tanker. The boom operator operating the boom controls must be qualified for the applicable category receiver. (This restriction does not apply during school house training provided the student boom operator is under direct instructor supervision.)

17.1.7.2. If the tanker autopilot is off, the tanker copilot will not fly the aircraft. (This restriction does not apply during school house training provided the student receiver pilot and the student tanker copilot are under direct IP supervision.)

17.1.7.3. For receiver pilot initial qualification or re-qualification, the receiver instructor/examiner pilot will be in one of the pilot seats with immediate access to the controls through all phases of the refueling from pre-contact until post air refueling.

17.1.8. If a change of pilot control is made, the receiver aircraft will move back to at least the pre-contact position except for immediate assumption of control by the instructor pilot.

17.1.9. If a receiver seat change takes place, move back to at least 100 feet in trail of the tanker and to a point where the receiver pilot can maintain visual contact with the tanker until the seat change is completed.

17.1.10. When conducting AR behind a KC-135, tanker disconnect capability must be demonstrated by a boom operator initiated disconnect prior to conducting a limit demonstration or a practice emergency separation from the contact position.

17.1.11. Weather Limitations.

17.1.11.1. Turbulence: Do not launch if severe turbulence is forecast on the refueling track. Terminate refueling if moderate turbulence is encountered.

17.1.11.2. Visibility: Do not close from 1 NM range (2 NM for receiver or tanker cell formations) unless you have visual contact with the tankers. Discontinue refueling if in-flight visibility is insufficient to continue safe refueling operations.

17.1.11.3. Recovery airfield must meet the weather criteria of AFI 11-202, Volume 3 for alternate airports.

17.2. (Not used).

17.3. (Not used).

17.4. (Not used).

17.5. Receiver Aircraft Commander Responsibilities.

17.5.1. Receiver aircraft shall squawk normal when separation from the tanker is greater than 3 miles.

17.5.2. Receiver aircraft will maintain two-way radio contact with ATC until cleared to the aerial refueling block altitude and cleared to the AR frequency by ATC.

17.6. ATC Clearance.

17.6.1. Altitude Reservations (ALTRV). Air refueling operations normally are done on tracks or anchor areas published in the DOD Flight Planning Document (FLIP). Certain missions or operational considerations may require air refueling operations in areas not published in FLIP in which an ALTRV is often used.

17.6.1.1. An ALTRV may include all, a portion, or portions of a published route. On operational missions, an ALTRV is usually provided for the refueling portions of the route. In some cases, an ALTRV is provided from the point of departure to a specified point short of the destination.

17.6.1.2. Aircraft operating on an ALTRV must operate within the altitude, time, and areas specified. Actual fix timing will not exceed 10 minutes from ALTRV estimates; otherwise the ALTRV will be canceled by ATC.

17.6.1.3. The mission must be airborne within a certain time period. The end of this period is the assigned void time (AVANA). This ensures separation between aircraft. Unless otherwise specified, AVANA is 1 hour after ALTRV published departure time.

17.6.1.4. If a mission is delayed beyond AVANA, rescheduling normally is by 24-hour increments based on the original departure time. It may be less provided the Central Altitude Reservation Facility (CARF) and affected air traffic control agencies concur.

17.6.1.5. An ALTRV does not preclude ATC from using ALTRV airspace provided standard separation is applied between all aircraft.

17.6.2. ALTRV Format. See FAA 7610.4H, Special Military Operations.

17.6.3. Filing:

17.6.3.1. An ALTRV approval includes a complete description of the route, including altitudes to be flown. When filing a DD Form 175, you do not need to repeat this in the route of flight portion of the flight plan. When filing a DD Form 1801, this information is repeated in the route of flight portion. In either case, include the term ALTRV plus the nickname/code name of the ALTRV in the remarks section of the flight plan.

17.6.3.2. If the ALTRV is to a point short of destination, the route of flight after the ALTRV must be identified on the flight plan. To complete the route of flight portion of the flight plan, identify the ALTRV as before, immediately followed by end ALTRV coordinates or fix, and a subsequent route description.

17.7. Communications Failure. Aircraft experiencing two-way communications failure during the conduct of AR shall continue flight in accordance with the following procedures:

17.7.1. Squawk code 7600 for at least 2 minutes prior to exiting the track or anchor.

17.7.2. Aircraft that have not received altitude instructions beyond the exit point shall exit the track or anchor at the lowest altitude specified in the clearance for the refueling portion of the flight and proceed in accordance with "Procedures for Two Way Radio Failure IFR-VFR" set forth in DoD Flight Information Handbook.

17.8. MARSA--Applicability for Aerial Refueling. MARSA begins between the tanker and receiver when the tanker advises ATC that it is accepting MARSA. MARSA is not an ICAO recognized term. If

in doubt as to what separation is provided by ATC, or what separation the aircrew is responsible for, query the tanker and/or controlling agency.

17.8.1. If MARSA has not been accepted by the tanker before the receiver reaching the air refueling initial point (ARIP), the receiver may be required to hold at the ARIP.

17.8.2. Once the rendezvous is completed, headings and altitude assignments may be made with the tanker concurrence with MARSA remaining in effect.

17.8.3. Upon completion of the rendezvous, receiver aircraft will remain within 3 miles of the tanker until MARSA is terminated.

17.8.4. MARSA ends when normal separation standards are established, ATC accepts control at end of refueling and ATC advises “MARSA is terminated.”

Chapter 18

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18.1. Not used for 89 AW Operations.

Chapter 19

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19.1. Not used for 89 AW Operations.

Chapter 20

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Chapter 23

AIRCREW CHEMICAL OPERATIONS AND PROCEDURES

23.1. General. Although 89 AW crews should not be tasked to fly into a chemical/biological contaminated area they may operate in areas within range of chemical/biological attack. This volume is intended to enhance other chemical defense training and provides the crewmember a basic understanding of utilizing the Ground Crew Ensemble (GCE) in a chemical-biological threat area (CBTA). It combines information from technical orders and unit inputs to form a single source document.

23.1.1. This volume briefly describes the nature of the chemical threat and agents that may be faced. Secondly, it discusses some of the situations and problems the aircrew may encounter in a CBTA. Preparatory actions and countermeasures are examined so the crewmember can make optimal use of the GCE.

23.2. Factors Influencing the Chemical Warfare (CW) Agent Hazard.

23.2.1. The major instance(s) in which a crew may be exposed to chemicals is through inhalation, absorption through the skin, eyes, and ingestion. Contaminated drink and food are considered harmful, but immediate concerns must be contamination avoidance to the maximum extent, limit exposure of the skin and eyes, as well as avoid breathing the contaminants. Factors affecting persistence are weather, agent physical characteristics, method of dissemination, droplet size, and the terrain.

23.2.2. Weather. Factors include temperature, wind, humidity, precipitation and atmospheric stability. For example, high winds and heavy rains reduce the contamination hazard. Conversely, lack of wind, overcast-skies, and moderate temperatures favor persistence.

23.2.3. Agent Dissemination. Disseminated as vapors, aerosols, or liquids. Solids seem unlikely, but agents may become solids at lower temperatures.

23.2.4. Agent Droplet Size. Persistence factor is determined by droplet size. Agents may be mixed with other chemicals ("thickeners"), and form large drops making removal more difficult.

23.2.5. Surface and Terrain. CW agent clouds tend to follow the terrain, flowing over countryside and down valleys. Chemicals persist in hollows, depressions, and other low areas. Rough terrain retards cloud movement. Flat countryside allows a uniform, unbroken cloud movement. Vegetated areas are more contaminated than barren terrain. Liquid agents soak into porous surfaces, making evaporation much slower than for non-porous surfaces.

23.3. Categories of Chemical Warfare Agents. CW agents having military significance may be categorized as nerve, blister, choking, and blood. Because they are produced biologically, toxins technically are not chemical agents. However, they are considered a potential CW threat.

23.4. Nerve Agents.

23.4.1. Military Significance. Nerve agents are the most lethal and fastest acting of the standard CW agents. These agents affect the nervous system and are highly toxic whether inhaled, ingested, or absorbed through the skin. Persistency ranges from hours to many days.

23.4.2. Symptoms of Exposure. Nerve agent exposure is difficult to distinguish. Normally, symptoms of nerve agent exposure appear in the following order. Initial exposure includes a runny nose,

tightness of the chest, dimness of vision, and pinpointing of the pupils. These symptoms are usually followed by difficulty in breathing, drooling, involuntary defecation and urination. Finally, exposure will lead to confusion, drowsiness, convulsions, coma and death.

23.4.3. Onset of Symptoms. Lethal respiratory dosages will cause death in 1 to 10 minutes and liquid exposure to the eyes will kill almost as rapidly. Depending on factors such as the amount and type of nerve agent, absorption through the skin may cause death anywhere from 1 to 2 minutes to 1 to 2 hours. Nerve agents are retained by the body for an extended period; thus intermittent, cumulative exposure to low amounts can lead to the same ultimate effect as a single exposure to a higher amount.

23.4.4. Protection. The full protective ensemble is effective against nerve agents. When properly worn, the various chemical protective masks prevents inhalation of nerve agents. Both the aircrew coveralls and ground crew ensemble provide limited protection to the skin. All layers of the outer garment must be protected against saturation of liquids, chemical agents, water, or petroleum.

23.4.5. Antidotes/Prophylaxis. Antidotes are effective in combating effects of nerve agent exposure. These antidotes may be effective if given to a victim having advanced symptoms, and as long as the victim is made to continue breathing. People who use the antidotes must be seen by medical personnel and may not be combat-ready for several days. Currently, nerve agents are the only agents there is an available field antidote. This antidote can be self-administered by the exposed individual or through self-aid buddy care. In addition, medical personnel have more specialized treatments available.

23.5. Blister Agents.

23.5.1. Military Significance. Blister agents are dispensed as vapors or liquids, and may be encountered as solids. These agents primarily affect the eyes, respiratory tract, and the skin.

23.5.2. Symptoms of Exposure. Placed on the skin, a drop the size of a pinhead can produce a blister one inch in diameter. This action is accentuated by moisture; hence, a more severe danger is present during periods of sweating. The groin and armpits, which tend to be sweaty, are especially susceptible to blister agents. Blister agents which come in contact with the eyes lead to redness, watering of the eyes, blurring of vision, sensitivity to light, and frequently, blindness. Inhalation causes serious damage due to burns and blisters to the mouth, nose, throat, and lungs. Incapacitation may last for days or weeks; aircrews will probably be unable to fly for indefinite periods. After hospitalization, complications from blister agent exposure can arise and may be fatal.

23.5.3. Onset of Symptoms. Blister agents are quickly absorbed through the skin. However, it usually takes several minutes (up to five minutes and as long as several hours) for the symptoms to appear. They act most rapidly in liquid form, but are also effective in vapor form.

23.5.4. Protection. The full protective ensemble is effective against blister agents. Exposed areas must be cleaned thoroughly immediately after exposure. Blister agents are easily transferred from contaminated surfaces, thus great care must be taken to avoid contact with any contamination.

23.6. Choking Agents.

23.6.1. Military Significance. These agents are disseminated as vapors and when inhaled affect the respiratory system by damaging the lungs. Persistence is very brief, and dissipate rapidly (within minutes) under most field conditions.

23.6.2. Symptoms of Exposure. Choking agents cause coughing, choking, tightness of the chest, nausea, headache, and watering of the eyes. Choking agents can be lethal, with death normally from the lungs filling with fluids, making breathing difficult or impossible.

23.6.3. Onset of Symptoms. Exposure to choking agents has an immediate effect. Victims experience slightly delayed effects, such as painful cough, breathing discomfort, and fatigue.

23.6.4. Protection. Both the aircrew and ground crew protective mask is extremely essential to protect against exposure; the entire protective ensemble should be used as directed.

23.7. Blood Agents.

23.7.1. Military Significance. Blood agents are usually dispensed as vapor or aerosol and inhaled. Under most field conditions they may briefly persist on target (up to 10 minutes).

23.7.2. Symptoms of Exposure. Exposure to a single breath of blood agent causes giddiness, headaches, confusion, and nausea. As dose increases, breathing becomes more difficult. The victim will have deep, uncontrollable breathing and cramps, then loss of consciousness. Death is certain if the victim receives no medical aid.

23.7.3. Protection. Blood agents are breathing hazards. The full ensemble is most effective because the mask provides the breathing protection needed.

23.7.4. Additional Threats. Blood agents will damage mask filters. All personnel must change mask filters at the earliest possible opportunity after a blood agent attack. **EXCEPTION**. Filters installed in aircrew CRU-80/P filter packs will be removed and replaced by aircrew life support (ALS) personnel (AFSC 1T1X1).

23.8. Aircrew Operations. Performance of duties while wearing chemical defense equipment can be extremely physically and mentally demanding. Special preparation and crew coordination are required to operate under chemical conditions. The information presented here will enable the aircrew to successfully operate in a chemical environment by recognizing limits and exploiting the capabilities of the chemical defensive equipment.

23.8.1. Planning.

23.8.1.1. Non-flying Ground Operations. Ground operations can represent the highest threat to aircrew safety. Protection from enemy attacks and exposure to liquid chemical agents is paramount. Aircrew should be advised to limit activities to essential duties only, and to separate ground duties from air duties. The ground ensemble is designed for quick donning and heavier levels of concentrations that can be more evident during ground operations. The aircrew ensemble is designed for the unlikely event of light concentration levels, that could be found during flying operations and transmitted to and from the aircraft.

23.8.1.2. Body Temperature/Fluids Control. Heat stress and dehydration are serious hazards while wearing the ACDE. Aircrew members need to control perspiration rates and limit activities to essential duties only. The need to consciously slow the work pace while performing physical labor, share workloads and monitor each other's physiological condition is essential.

23.8.1.3. Restricted Communications. Normal communications are limited while wearing the chemical defense mask. Communications can be enhanced by using the mini-amplifier/speaker with the mask. Otherwise, visual signals may be used to compensate.

23.9. Limitations. Aircrews must be mentally prepared to face the dangers of chemical weapons. Flight planning must be thorough and aircraft commanders should emphasize chemical defensive operations during mission planning, hazards and countermeasures, plans for onload/offload in the event of a ground attack, and plans for the return leg in the event of a contaminated aircraft. Alternate scenario plans should also be considered in the event conditions change.

23.9.1. Mask/Filter Assembly Limitations. Wearing any of the chemical defense masks/filter assemblies imposes the following limitations:

23.9.1.1. The mask/filter assembly prevents the detection of fumes from fuel, hydraulic fluid and oil.

23.9.1.2. The filter assembly will not protect the user against ammonia fumes and carbon monoxide gas.

23.10. GCE Issue. Aircrews will be issued sized GCEs at home station. Crew members will check mobility bag contents and correct sizes, and ensure their GCE is available at all times while in a CBTA.

23.11. Operations in a Chemical-Biological Threat Area (CBTA).

23.11.1. Establishing Threat Level. Aircrews should monitor C2 channels to ensure they receive the latest information concerning the destination's alert condition. Diversion of 89th aircraft to alternate "clean" locations may be required, unless operational necessity dictates. The local AMC C2 Center will direct aircrews to undergo medical pre-treatment for chemical exposure.

23.11.2. Protective Equipment Postures. Standardized USAF alert conditions and recommended ACDE requirements are listed below based on a chemical-biological threat.

23.11.2.1. NOTE: These alarms may be different based on the host country requirements.

23.11.2.2. "ALL CLEAR" Attack is not probable, nor is chemical-biological contamination present. Notification--Verbal; removal of warning flags/placards. GCE requirements--equipment is issued, prepared, and readily available.

23.11.2.3. "ALARM YELLOW" Attack is probable. Notification--Verbal; posting of yellow warning flags/placards. GCE requirements--appropriate components should be worn with the mask/hood immediately available commensurate with ground duties.

23.11.2.4. "ALARM RED" ("ALARM BLUE" in Korea). Attack is imminent or in progress. Notification--Verbal; posting of red warning flags/placards; one minute warbling tone on siren (3 seconds on-1 second off). Aircraft inbound will hold/divert. On the ground, personnel will take immediate cover and don full GCE.

23.11.2.5. "ALARM BLACK" Contamination is suspected or present. Notification--posting of black warning flags/placards; warbling tone on siren (1 second on-1 second_off). GCE requirements--full ensemble will be worn. Personnel will remain indoors or under liquid agent cover.

23.12. Donning Equipment. Aircrew will don GCE based on the alarm condition. When wearing the GCE, Atropine and 2 PAM Chloride auto injectors will be kept in the upper left pocket. This standardized location will allow personnel to locate the medication should an individual be overcome by nerve agent poisoning. M-9 paper on the GCE will facilitate detection of liquid chemical agents and GCCA processing. M-9 paper should be placed on the GCE prior to entering a CBTA when an alarm "yellow" or higher

has been declared. When inbound to CBTA, prior to descent, the aircraft commander will ensure crew and passengers don appropriate protective equipment IAW arrival destination's mission oriented protective posture (MOPP) level and brief aircrew operations in the CBTA. As a minimum, this briefing will include: flight deck isolation, oxygen requirements, air conditioning system requirements, CW clothing requirements, ground operations and MOPP levels.

23.13. Ground Operations.

23.13.1. Off/On Considerations. Extreme care must be exercised to prevent contamination of aircraft interiors during ground operations, particularly to the flight deck area. Reduce the number of personnel entering the aircraft. Contaminated engine covers, safety pins, and chocks will not be placed in the aircraft unless sealed in clean plastic bags.

23.13.2. Physiological Factors. Aircraft commanders must be very sensitive to the problems resulting from physical exertion while wearing GCE. The aircraft commander should consider factors such as ground time, temperature and remaining mission requirements when determining on/offload requirements. Individuals involved should be closely monitored for adverse physiological effects.

23.13.3. Communications. Conducting on/offloading operations while wearing the complete ACDE complicates communications capability. Use the mini-amplifier/speaker or the aircraft public address system and augment with flashlight and hand signals as required.

23.14. Chemical Attack During Ground Operations. If an attack (Alarm Red) occurs during on/offloading operations or transport to and from aircraft, take immediate cover away from the aircraft/vehicle. Don full GCE.

23.14.1. NOTE. Aircrews could be expected to forward information concerning medical aid, damage estimates, and unexploded ordinance. Appropriate information may be forwarded via the aircraft radios to controlling agencies.

23.15. Crew Rest Procedures. Since 89 AW aircrew cannot fly contaminated aircraft, it may become necessary for the aircrew to rest in a contaminated CBTA. Personnel caught in a chemical attack will be airlifted out of the CBTA as lift becomes available.

23.16. Contamination Control Areas (CCA) Procedures. 89 AW aircrews will proceed to the Ground Crew Contamination Control Area (GCCA) for processing. All personnel will remove protective clothing IAW established procedures located in the GCCA.

NOTE:

Do NOT proceed to the aircrew contamination control area (ACCA). This area is used solely to decontaminate personnel wearing the Aircrew Chemical Defense Ensemble.

23.17. Work Degradation Factors. Work timetables need to be adjusted to minimize thermal stress caused by wearing the GCE. The following are degradation factors for wearing full GCE. To estimate how much time it takes to perform a task or operation, (1) take the Task Time Multiplier for the appropriate Work Rate and ambient air temperature and (2) multiply it by the time it normally takes to perform the task. For example, given a heavy work rate and an air temperature of 70F, the crewmember should expect

a normal one hour task to take 2.1 hours while wearing ACDE. A more extensive discussion of this subject is found in AFMAN 32-4005, *Personnel Protection and Attack Actions.*

Table 23.1. Task Time Multipliers.

TASK TIME MULTIPLIERS			
Work Rate	**Temperature**		
	20-49F	**50-84F**	**85-100F**
Light	1.2	1.4	1.5
Moderate	1.3	1.4	3.0
Heavy	1.7	2.1	5.0

23.18. Forms Prescribed. AF Form 4113, **INS Flight Plan and Record,** AF Form 4078, **Position Label**, AF Form 4075, **Aircraft Load Data Worksheet**, AF Form 4084, **Air Passenger Specialist Mission Planning Worksheet,** AF Form 4085, **Mission Expense Record,** and AF Form 4092, **Flight Itinerary.**

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoD 4515.13R, *Air Transportation*

AFPD 10-9, *Lead Operating Command Weapon Systems Management*

AFPD 11-2, *Aircraft Rules and Procedures*

AFPD 10-21, *Air Mobility Lead Command Roles and Responsibilities*

AFI 10-403, *Deployment Planning*

AFI 11-202V1, *Aircrew Training*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFI 11-202V3, *General Flight Rules*

AFI 11-207, *Flight Delivery of Fighter Aircraft*

AFI 11-209, *Air Force Participation in Aerial Events*

AFI 11-215, *Flight Manual Program*

AFI 11-218, *Aircraft Operations and Movement on the Ground*

AFI 11-221, *Air Refueling Management (KC-10 and KC-135)*

AFI 11-222, *Tanker Activity Report*

AFI 11-299, *Nuclear Airlift Operations*

AFI 11-401, *Flight Management*

AFI 11-2SAMV1, *SAM Aircrew Training*

AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*

AFI 13-207, *Preventing and Resisting Piracy [Hijacking]*

AFI 13-401, *Managing the Information Security Program*

AFI 21-101, *Maintenance Operations and Management Policy*

AFI 23-202, *Buying Petroleum Products and Other Supplies and Services Off-Station*

AFI 31-101V1, *Air Force Physical Security Program*

AFI 31-207, *Arming and Use of Force by Air Force Personnel*

AFI 34-219, *Alcoholic Beverage Program*

AFI 31-401, *Information Security Program Management*

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*

AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*

AFI 37-138, *Records Disposition - Procedures and Responsibilities*

AFI 48-104, *Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft, and Other Transports of the Armed Forces (Joint)*

AFI 48-123, *Medical Examinations and Standards*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFMAN 10-206, *Operational Reporting*

AFM 67-1V1, *Supply/Fuels Wartime Planning*

AFOSH Standard 127-100, *Aircraft Flight Line - Ground Operations and Activities*

AFMAN 11-117, *Instrument Procedures*

AFPAM 91-212, *Bird Aircraft Strike Hazard (BASH) Management Techniques*

Joint Pub 1-02, *The DOD Dictionary of Military and Associated Terms*

Abbreviations and Acronyms

ACDE—Aircrew Chemical Operations and Procedures

ACF—Acceptance Check Flight

AGE—Aircraft Ground Equipment

ASNCO—Aircraft Security Non Commissioned Officer (NCO)

AOR—Area of Responsibility

APU—Auxiliary Power Unit

AR—Air Refueling

ARCT—Air Refueling Control Time

ASRR—Airfield Suitability and Restriction Report

ATC—Air Traffic Control

BASH—Bird Aircraft Strike Hazard

BRNAF—Basic Area Navigation Airspace

C2—Command and Control

CDT—Crew Duty Time

CG—Center of Gravity

CW—Chemical Warfare

CCA—Contamination Control Area

CECR—Crew Enhancement Crew Rest

CFP—Computer Flight Plan

COE—Certification of Equivalency

CSO—Communications Systems Operator

CSS—Chief Servicing Supervisor

CVAM—Special Air Missions Office

CVR—Cockpit Voice Recorder

DCS—Defense Courier Service

DH—Decision Height

EAL—Entry Access List

EAR—End Air Refueling

EMCON—Emission Option

ETA—Estimated Time of Arrival

ETE—Estimated Time En route

ETIC—Estimated Time in Commission

ETP—Equal Time Point

FCB—Flight Crew Bulletin

FAF—Final Approach Fix

FCF—Functional Check Flight

FCIF—Flight Crew Information File

FDP—Flight Duty Period

FIR—Flight Information Region

FMC—Fully Mission Capable

FMS—Flight Management System

FOD—Foreign Object Damage

FOL—Forward Operating Location

FSO—Flying Safety Officer

GPS—Global Positioning System

HATR—Hazardous Air Traffic Report

ICS—Infant Car Seat

IFF—Identification Friend or Foe

INS—Inertial Navigation System

LAAR—Low Altitude Air Refueling

LRC—Long Range Cruise

MAF—Mobility Air Forces

MARSA—Military Assumes Responsibility for Safe Altitude

MC—Mission Capable

MCD—Medical Crew Director

MDS—Mission Design Series (e.g., C-37A)

ME—Mission Essential

MEL—Minimum Equipment List

MOB—Main Operating Base

MNPS—Minimum Navigation Performance Specifications

MSL—Mean Sea Level

NDB—Non Directional Beacon

NEW—Net Explosives Weight

NM—Nautical Mile

NOTAM—Notice to Airmen

OIS—Obstacle Identification Surface

PDO—Publication Distribution Office

PNF—Pilot Not Flying

PMCR—Post Mission Crew Rest

PPO—Presidential Pilot Office

PPR—Prior Permission Required

PMSV—Pilot to Meteorologist Service

PSN—Proper Shipping Name

RNP—Required Navigation Performance

ROE—Rules of Engagement

RRFL—Required Ramp Fuel Load

RVSM—Reduced Vertical Separation Minimum

SAAM—Special Assignment Airlift Mission

SENEX—Senior Executive Support Mission

SID—Standard Instrument Departure

SIGMET—Significant Metrorological Information

SPR—Single Point Refueling

STM—Supplemental Training Mission

TCAS—Traffic Alert and Avoidance System

TKACT—Tanker Activity Report

TOLD—Take off and Landing Data

UEL—Unescorted Entry List

Terms: Common mobility terms and associated abbreviation. Additional terms common to the aviation community may also be found in FAR, Part 1 and DoD FLIP, ***General Flight Planning***, Chapter 2.

Additional Crewmember —AMC or AMC appointed crewmember who is authorized by the appropriate (AMCI 11-208) to accompany the normal crew complement.

Advance Notice Message—A message dispatched when required by the USAF Foreign Clearance Guide (FCG) to provide advance notification to interested agencies of mission itinerary and support requirements. It may be combined with a diplomatic clearance request message.

Aeromedical Evacuation Coordination Center (AECC)—A coordination center, within the Joint Air Operations Center, which monitors all activities related to aeromedical evacuation (AE) operations execution. It manages the medical aspects of the AE mission and serves as the net control station for AE communications. It coordinates medical requirements with airlift capability, assigns medical missions to the appropriate AE elements, and monitors patient movement activities.

Aircrew Threat Advisory—An intelligence message containing information about a situation which may pose a direct threat to AMC aircrews.

Air Force Satellite Communication (AFSATCOM)—Satellite communications system capable of 75 bits per second (BPS) record message traffic.

Air Force Component Commander (AFCC)—In a unified, sub-unified, or joint task force command, the Air Force commander charged with the overall conduct of Air Force air operations.

Aircraft Security NCO (ASNCO)—89th Security Forces personnel assigned as integral members of SAM aircrews to protect Presidential, SENEX, and SDSAM aircraft and associated personnel and equipment. See **Chapter 15** of this AFI for an amplified explanation.

Airlift—Aircraft is considered to be performing airlift when manifested passengers or cargo are carried.

Air Mobility Control Center (AMCC)—Provides global coordination of tanker and airlift for AMC and operationally reports to the TACC. Functions as the AMC agency that manages and directs ground support activities and controls aircraft and aircrews operating AMC strategic missions through overseas locations.

Air Mobility Element—(D0D) The air mobility element is an extension of the Air Mobility Command Tanker Airlift Control Center deployed to a theater when requested by the geographic combatant commander. It coordinates strategic airlift operations wit the theater airlift management system and collocates with the air operations center whenever possible. Also called AME.

Air Reserve Component (ARC)—Refers to Air National Guard and AFRC forces, both Associate and Unit Equipped.

Andromeda—Interactive computer database system used by the 89 AW and USAF/CVAM to schedule and manage 89 AW special air missions.

Antarctic Flight—Flight conducted south of 56 degrees south latitude.

Arctic Flight—Flight conducted between 15 degrees and 180 degrees west longitude (exclusive of Iceland) north of 50 degrees north latitude between 1 October and 15 April. Transoceanic flights are excluded.

Arrival Tim—The block-in time, rather than the landing time.

Air Route Traffic Control Center (ARTCC)—The principal facility exercising en route control of aircraft operating under instrument flight rules within its area of jurisdiction. Approximately 26 such centers cover the United States and its possessions. Each has a communication capability to adjacent centers.

Air Traffic Control (ATC)—A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

Alert Aircraft/Crew—A designated aircraft and crew capable of launching on a mission within a predetermined period of time beginning with launch notification from HQ USAF/CVAM to 89 OG/OGO.

Allowable Cabin Load (ACL)—The maximum payload which can be carried on a mission. It is the difference between the zero fuel weight limit and the aircraft operating weight.

Augmented Crew—Basic aircrew supplemented by additional qualified aircrew members to permit in-flight rest periods as defined in **Chapter 3** of this AFI.

Bird Aircraft Strike Hazard (BASH)—An Air Force program designed to reduce the risk of bird strikes.

Bird Condition Low—No significant bird activity which would present a probable hazard to flying operations. No operating restrictions.

Bird Condition Moderate—Concentrations of 5 to 15 large birds (waterfowl, raptors, gulls, etc.) or 15 to 30 small birds (terns, swallows, etc.) observable in locations that represent a probable hazard to flying operations.

Bird Condition Severe—Concentrations of more than 15 large birds (waterfowl, raptors, gulls, etc.) or more than 30 small birds (terns, swallows, etc.) observable in locations that represent a probable hazard to flying operations.

Block Time—Time determined by the scheduling agency responsible for mission accomplishment for the aircraft to arrive at (block in) or depart from (block out) the parking spot. The 89 AW further defines "Block Time" as the time the door will open on arrival.

BLUE BARK—US military personnel, US citizen civilian employees of the Department of Defense, and the dependents of both categories who travel in connection with the death of an immediate family member. It also applies to designated escorts for dependents of deceased military members. Furthermore, the term is used to designate the personal shipment of a deceased member.

Border Clearance—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunizations requirements.

Category I Route—Any route that does not meet the requirements of a category II route, including tactical navigation and over water routes.

Category II Route—Any route on which the position of the aircraft can be accurately determined by the

overhead crossing of a radio aid (NDB, VOR, TACAN) at least once each hour with positive course guidance between such radio aids.

CLOSE HOLD—USAF/CVAM term assigned to all aspects of a SAM when destination, passengers' names, or other mission details are restricted from general release.

COIN ASSIST—Nickname used to designate dependent spouses accompanying dependent children and dependent parents of military personnel reported missing or captured who may travel space available on military aircraft for humanitarian purposes on approval of the Chief of Staff, United States Army; Chief of Staff, United States Air Force; Chief of Naval Operations; or the Commandant of the Marine Corps.

Command and Control (C2)—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2.

Command and Control Center (C2 CENTER)—Each C2 CENTER provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this AFI, C2 centers including operations centers, command posts, air mobility elements, tanker airlift control elements (TALCE), air mobility control centers, and tanker task forces.

Command and Control Information Processing System (C2IPS)—Computer-based information transmission and information handling for command and control functions associated with the Director of Mobility Forces (DIRMOBFOR), AME fixed units, and TALCE. Interfaces to and automatically updates the Global Decision Support System (GDSS).

Communications Systems Operator (CSO)—Flight crew member responsible for inspecting, operating, and maintaining all communications and electronic equipment aboard the aircraft. See **Chapter 14** of this AFI for an amplified explanation.

CONFERENCE SKYHOOK—Communication conference available to help aircrews solve in-flight problems that require additional expertise.

Contingency Mission—Mission operated in direct support of an OPORD, OPLAN, disaster, or emergency.

Critical Leg—The segment of a mission that determines the ACL which may be carried over that route.

Critical Phase Of Flight—Takeoff, air refueling, formation below minimum safe altitude, low level, airdrop, approach, and landing.

Current Operations Branch—89 OG/OGO.

CVAM (Special Air Missions Office)—Agency within the office of the USAF Vice Chief of Staff responsible for scheduling and committing all Air Force airlift required to support the White House or any other executive branch of the government. This office is the single coordinating agent for the SAM aircraft fleet and schedules 89 AW special air missions.

Deadhead Time—Duty time for crew members in passenger status, positioning or de-positioning for a mission or mission support function.

Departure Time—The block-out time, rather than the takeoff time.

Designated Courier—Officer or enlisted member in the grade of E-5 or above of the US Armed Forces,

or a Department of State diplomatic courier, selected by the Defense Courier Service (DCS) to accept, safeguard, and deliver DCS material as directed. A primary aircrew member should be used as a courier only as a last resort.

Diplomatic Clearance Request Message—A message dispatched to request diplomatic clearance for over-flight and/or transit of foreign territories. Message content and addresses are specified in the USAF Foreign Clearance Guide (FCG). This message is usually combined with the advance notice message.

Direct Instructor Supervision—Supervision by an instructor of like specialty with immediate access to controls (for pilots, the instructor must occupy either the pilot or copilot seat).

Director, Mobility Forces (DIRMOBFOR)—Individual in command of all mobility forces within a designated area or for a designated operation. In overseas theaters, the DIRMOBFOR is normally responsible for theater mobility force management. The Air Force component commander exercises operational control of assigned or attached mobility forces through the DIRMOBFOR. The DIRMOBFOR monitors and manages assigned mobility forces operating in theater.

Distinguished Visitor (DV)—Passengers, including those of friendly nations, of colonel rank and higher, or equivalent status including diplomats, cabinet members, members of Congress, and other individuals designated by the DoD due to their mission or position (includes BLUE BARK and COIN ASSIST).

Distinguished Visitor/Mystic Star Message (DV Message)—A classified message dispatched with the DVs name/status code and mission number. This message also establishes Mystic Star priority and requests Mystic Star network and support. This message is usually sent with the advance notice and diplomatic clearance request message.

Diverse Departure—The airfield has been assessed for departure by TERPS personnel and no penetration of the obstacle surfaces exists. An aircraft may depart the field, climb to 400 feet above the departure end of the runway elevation, turn in any direction, and if a minimum climb gradient of 200’/NM is maintained be assured of obstacle clearance. This is normally indicated on DoD/NOAA publications by the absence of any published departure procedures.

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "Due Regard" obligates the military aircraft commander to be his or her own air traffic control (ATC) agency and to separate his or her aircraft from all other air traffic (See *FLIP General Planning*, section 7).

Enlisted Aircrew Coordinator (EAC)—The appointed NCO crewmember (not necessarily the ranking) tasked with coordinating all enlisted aircrew issues and concerns in regards to a particular mission. Enlisted crewmembers should attempt to resolve most issues and concerns with the EAC who in turn reports to the aircraft commander.

Equal Time Point (ETP)—The point along a route at which an aircraft may either proceed to the destination/first suitable airport, or return to the departure base/last suitable airport in the same amount of time. It may be based on all engines operating or with one engine inoperative.

Estimated Time of Arrival (ETA)—Same as estimated block-in time. Landing time is different than ETA.

Estimated Time of Block-in/Block-out (ETB)—Same as estimated time aircraft door will open for arrival or close for departure.

Estimated Time of Departure (ETD)—Same as estimated block-out time. Takeoff time is different than departure time.

Estimated Time In Commission (ETIC)— Estimated time required to complete required maintenance.

Extended Range Operations—For twin engine aircraft, those flights conducted over a route containing a point further than 60 minutes flying time at the one-engine inoperative cruise speed (under standard conditions in still air) from a suitable en route alternate.

Familiar Field—An airport in the local flying area at which unit assigned aircraft routinely perform transition training. Each operations group commander will designate familiar fields within their local flying area. See **Chapter 10** for approved fields and limitations.

First Pilots—First pilots are highly experienced copilots who are qualified IAW volumes 1 and 2 of this instruction to taxi, take-off, and land the aircraft from the left seat under the supervision of a qualified aircraft commander.

Flight Attendants (F/A)—Flight crew member to provide cabin service, instruct passengers in the use of emergency equipment, direct and control passengers under emergency conditions, and maintain cabin cleanliness. See**Chapter 13** of this AFI for an amplified explanation.

Global Decision Support System (GDSS)—AMC's primary execution command and control system. GDSS is used to manage the execution of AMC airlift and tanker missions.

Global Patient Movement Requirements Center—A joint activity reporting directly to the Commander in Chief, US Transportation Command, the Department of Defense single manager for the regulation of movement of uniformed services patients. The Global Patient Movement Requirements center authorizes transfers to medical treatment facilities of the Military Departments or the Department of Veterans Affairs and coordinates inter theater and CONUS patient movement requirements with the appropriate transportation component commands of US Transportation Command.

Ground Time—Interval between engine shut down (or arrival in the blocks if engine shutdown is not scheduled) and next takeoff time. 89 AW defines this as the interval between door open on arrival and door close on departure.

Hazardous Cargo or Materials—Articles or substances that are capable of posing significant risk to health, safety, or property when transported by air. These articles or substances are classified as explosive (class 1), compressed gas (class 2), flammable liquid (class 3), flammable solid (class 4), oxidizer and organic peroxide (class 5), poison and infectious substances (class 6), radioactive material (class 7), corrosive material (class 8), or miscellaneous dangerous goods (class 9). Classes may be subdivided into divisions to further identify hazard, i.e., 1.1, 2.3, 6.1, etc.

Hotel Reservation Message (HOTRES)—A message dispatched to request crew accommodations and transportation per the scheduled mission itinerary. This message is usually combined with the advance notice message and diplomatic clearance request message.

Instructor Supervision—Supervision by an instructor of like specialty. For critical phases of flight, the instructor must occupy one of the seats or stations, with immediate access to the controls.

Itinerary Change Message (Itin Change)—A message dispatched to change the original itinerary, due to changes in the scheduled mission, published in the original advance notice message or diplomatic clearance message.

L-Band SATCOM—600 BPS satellite communications (SATCOM) system contracted through the International Maritime Satellite Organization (INMARSAT), used primarily for command and control. The system consists of a satellite transceiver, a laptop computer, and a printer.

Leg Time—Time between door closed on departure to door open on arrival.

Local Training Mission.—A mission scheduled to originate and terminate at home station, generated for training or evaluation, and executed at the local level.

Maintenance Status/Codes:—

A-1; No maintenance required. Fully Mission Capable (FMC).

A-2 (Plus Noun); Minor maintenance required, but not serious enough to cause delay. Attempt to describe the nature of the system malfunction to the extent that appropriate maintenance personnel will be available to meet the aircraft. When possible, identify system as mission essential (ME) or mission contributing (MC). Partially Mission Capable (PMC). PMC + M: Maintenance, PMC + S: Supply, PMC + B: Both.

A-3 (Plus Noun); Major maintenance. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above. Not Mission Capable (NMC). NMC + M: Maintenance, NMC + S: Supply, NMC + B: Both.

A-4; Aircraft or system has suspected or known biological, chemical, or radiological contamination.

Mission—The task, together with the purpose, that clearly indicated the action to be taken and the reason therefor. In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task. The dispatching of one or more aircraft to accomplish one particular task.

Mission Advisory—Message dispatched by command and control agencies, liaison officers, or aircraft commanders advising all interested agencies of any changes in status affecting the mission.

Mobility Air Force (MAF)—Forces assigned to mobility aircraft or MAJCOMs with operational or tactical control of mobility aircraft.

MYSTIC STAR—Worldwide high frequency (HF) network tied together with high quality, dedicated, intersite circuits to provide worldwide communication capability for high ranking government officials. When activated for a mission, the master net control station at Andrews AFB has the capability to remotely seize control of HF equipment at various locations; therefore, the airborne operator is always in contact with the operator at Andrews. MYSTIC STAR service is only provided for certain missions.

Operational Control (OPCON)—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commanders in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself,

include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON.

Operational Missions—Missions executed at or above TACC level. Operational missions termed "CLOSE WATCH" include CORONET missions and AFI 11-221, *Air Refueling Management (KC-10 and KC-135)*, priority 1, 2, and 3 missions tasked by the TACC. Other operational missions such as deployment, re-deployment, reconnaissance operations, operational readiness inspections (ORI), AMC channel or SAAM, and JA/ATT missions may be designated "CLOSE WATCH" as necessary.

Opportune Airlift—Transportation of personnel, cargo, or both aboard aircraft with no expenditure of additional flying hours to support the airlift.

Originating Station—Base from which an aircraft starts on an assigned mission. May or may not be the home station of the aircraft.

Operational Risk Management (ORM)—ORM is a logic-based, common sense approach to making calculated decisions on human, materiel, and environmental factors before, during, and after Air Force operations. It enables commanders, functional managers and supervisors to maximize operational capabilities while minimizing risks by applying a simple, systematic process appropriate for all personnel and Air Force functions.

Overwater Flight—Any flight that exceeds power off gliding distance from land.

Permit to Proceed—Aircraft not cleared at the first US port of entry may move to another US airport on a permit to proceed issued by customs officials at the first port of entry. This permit lists the requirements to be met at the next point of landing, i.e. number of crew and passengers, cargo not yet cleared. Aircraft commanders are responsible to deliver the permit to proceed to the customs inspector at the base where final clearance is performed (Heavy monetary fines can be imposed on the aircraft commander for not complying with permit to proceed procedures).

Point of No Return—A point along an aircraft track beyond which its endurance will not permit return to its own or some other associated base on its own fuel supply.

Point of Safe Return—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with required fuel reserve.

Positioning and De-positioning Missions—Positioning missions are performed to relocate aircraft for the purpose of conducting a mission. De-positioning missions are made to return aircraft from bases at which missions have terminated.

PPO—Presidential Pilot Office.

Presidential Aircraft—Any aircraft used to transport the President of the United States, or designated as a Presidential aircraft by White House Military Office through PPO. Presidential aircraft require continuous security protection at home station, en route operating locations, and contract maintenance facilities. Other aircraft may be temporarily upgraded to Presidential aircraft security status for a particular mission.

Quick Stop—Set of procedures designed to expedite the movement of selected missions by reducing ground times at en route or turnaround stations.

Ramp Coordinator—Designated representative of the C2 CENTER whose primary duty is the coordination of ground handling activities on the ramp during large scale operations.

Ramp Freeze—Term used at Andrews AFB to denote a set of security procedures within a fixed geographical area on the flight line to ensure the safety of high-level DVs. Generally, all vehicular traffic is prohibited in a designated area except for security police and personnel and vehicles directly supporting the departing or arriving DV. Refer to AAFBR 900-6 for further information.

SAM Delay—A Special Air Missions (SAM) delay occurs when the DV and accompanying party is ready for departure and the DV's departure is delayed due to maintenance or operational reasons.

Scheduled Takeoff Time—That time established in the mission itinerary for departure.

Scheduled Return Date (SRD)—Scheduling tool used by air mobility units to predict when crews will return to home station. It allows force managers to plan aircrew availability and provide crews visibility over monthly flying activities. AMC and AMC-gained aircrews (except those on standby at home station) will have an SRD established on their flight orders.

Senior Executive Support Mission (SENEX)—Mission assigned to C-20C aircraft dedicated to support senior level federal officials.

Significant Meteorological Information (SIGMET)—Area weather advisory issued by an ICAO meteorological office relayed to and broadcast by the applicable ATC agency. SIGMET advisories are issued for tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, severe and extreme turbulence, severe icing, and widespread dust or sand storms. SIGMETs frequently cover a large geographical area and vertical thickness. They are prepared for general aviation and may not consider aircraft type or capability.

Special Air Mission (SAM)—Missions operated by aircraft assigned to the 89 AW at the direction of USAF/CVAM.

Special Assignment Airlift Mission (SAAM)—Funded airlift that cannot be supported by channel missions because of the unusual nature, sensitivity, or urgency of the cargo or that requires operations to points other than the established channel structure.

Specifically Designated Special Air Mission (SDSAM)—Any mission specifically identified by USAF/CVAM as requiring special security procedures.

Squadron—Refers to SAM fixed-wing aircraft squadrons within the 89 AW.

Stations Time—Normally, 30 minutes prior to departure time. Aircrews will have completed their pre-flight duties/appropriate checklists, and be at their crew positions.

TACC—The Air Mobility Command direct reporting unit responsible for tasking and controlling operational missions for all activities involving forces supporting US Transportation Command's global air mobility mission. The Tanker Airlift control Center is comprised of the following functions: current operations, command and control, logistics operations, aerial port operations, aeromedical evacuation, flight planning, diplomatic clearances, weather, and intelligence. Also called TACC.

Tanker Airlift Control Element (TALCE)—Team of qualified Air Force personnel established to control, coordinate, and function as an Air Force tanker and airlift C2 facility at a base where normal AMC C2 facilities are not established or require augmentation. TALCEs support and control contingency operations on both a planned and no-notice basis.

Tanker Task Force (TTF)—Force of tanker aircraft assembled and tasked to perform a specific function.

Theater Patient Movement Requirements Center (TPMRC)—The TPMRC is responsible for theater

wide patient movement (e.g., medical regulating and AE scheduling), and coordinates with theater MTFs to allocate the proper treatment assets required to support its role. The primary role of the TPMRC is to devise theater plans and schedules and then monitor their execution in concert with the GPMRC. The TPMRC is responsible to the Combatant Commander through the Combatant Command Surgeon. The TPMRC is also responsible for all aspect of intra theater patient movement management. A TPMRC provides command and control for patient movement management operations in its theater of operations, as directed by its Combatant Commander's operational policy, and in coordination with USTRANSCOM, acting as a supporting combatant command, responsible for inter theater and CONUS patient movement.

Time Out—Common assertive statement used to voice crewmember concern when safety may be jeopardized.

Training Mission—Mission executed at the unit level for the sole purpose of aircrew training for upgrade or proficiency. Does not include operational missions as defined in this AFI.

Unescorted Entry List (UEL)—UELs are computerized lists of personnel authorized unescorted entry to Presidential, SENEX, and SDSAM aircraft to perform their duties. UELs are also categorized to indicate individuals authorized to escort personnel onto aircraft, and individuals authorized to grant escorted entry to the aircraft. UEL categories are published in AFI 31-101, volume 1, *The Physical Security Program.*

Unit Move—Unit relocation in support of a contingency or exercise deployment/redeployment. These moves are made to desired areas of operation or to designated locations, and are made IAW a troop movement schedule.

White House Communications Agency (WHCA)—A joint service field unit of the Defense Information Service Agency (DISA) which provides communications support for the White House.

WHMO—White House Military Office.

Zero Fuel Weight (Actual)—Weight, expressed in pounds, of a loaded aircraft not including wing and body tank fuel. All weight in excess of the maximum zero fuel weight will consist of usable fuel.

Zero Fuel Weight (Maximum)—The weight expressed in pounds where an addition to the aircraft gross weight can be made only by adding fuel in the tanks. This value is called "Limiting Wing Fuel" on the DD Form 365F, Weight and Balance Clearance Form.

89 AW—Refers to all Air Mobility Command's 89 AW SAM units and MDS assigned aircraft at Andrews AFB.